

D-555/Z555

SERVICE MANUAL



US Model
D-555

AEP Model

UK Model

E Model
D-Z555

Discman

Model Name Using Similar Mechanism	D-250
Tape Transport Mechanism Type	CDM-555

SPECIFICATIONS

CD section

System	Compact disc digital audio system
Laser diode properties	Material: GaAlAs Wavelength: 780 nm Emission duration: Continuous Laser output: Less than 44.6 μ W This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.
Error correction	Sony Super Strategy Cross Interleave Reed Solomon Code
D-A conversion	16-bit linear, 8fs digital filter
Frequency response	20 - 20,000 Hz \pm 1 dB*
Signal-to-noise ratio	More than 90 dB
Wow and flutter	Below measurable limit*
Outputs (at 9 V input level)	Line output (stereo minijack) Output level 0.7 V rms at 50 kilohms Load impedance over 10 kilohms Optical digital output (optical output connector) Output level: -21 - -15 dBm Wavelength: 630 - 690 nm at peak level Headphones (stereo minijack) 9 mW + 9 mW at 32 ohms

* Measured by EIAJ CP-307

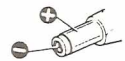
General

Power requirements	Supplied rechargeable battery pack (BP-2EX) or BP-100 (optional) DC IN 9 V jack accepts: Supplied AC power adaptor for use on 120V AC, 60 Hz Sony CPM-200P car mount plate (optional) or Sony DCC-120A car battery cord (optional) for use on 12 V car battery
Power consumption	3.2 W DC
Dimension	Approx. 127.6 \times 33 \times 145 mm (5 \times 1 $\frac{3}{16}$ \times 5 $\frac{11}{16}$ inches) (w/h/d) not incl. inclined part (depth), projecting parts and controls Approx. 130 \times 33.8 \times 145.5 mm (5 $\frac{1}{8}$ \times 1 $\frac{3}{16}$ \times 5 $\frac{11}{16}$ inches) (w/h/d) incl. projecting parts and controls
Weight	Approx. 520g (1.2lb) not incl. rechargeable battery Approx. 600g (1.5lb) incl. rechargeable battery (BP-2EX)
Supplied accessories	AC power adaptor (1) Rechargeable battery pack (1) Carrying case (1) Connecting cord (1) (stereo miniplug - two phono plugs)

Design and specifications subject to change without notice.

Notes on AC power adaptor

- Disconnect the AC power adaptor when the unit will not be used.
- Use only the supplied AC power adaptor or the recommended car battery cord manufactured by Sony. Polarity of the plugs of other manufacturers may be different.



Polarity of the Sony plug

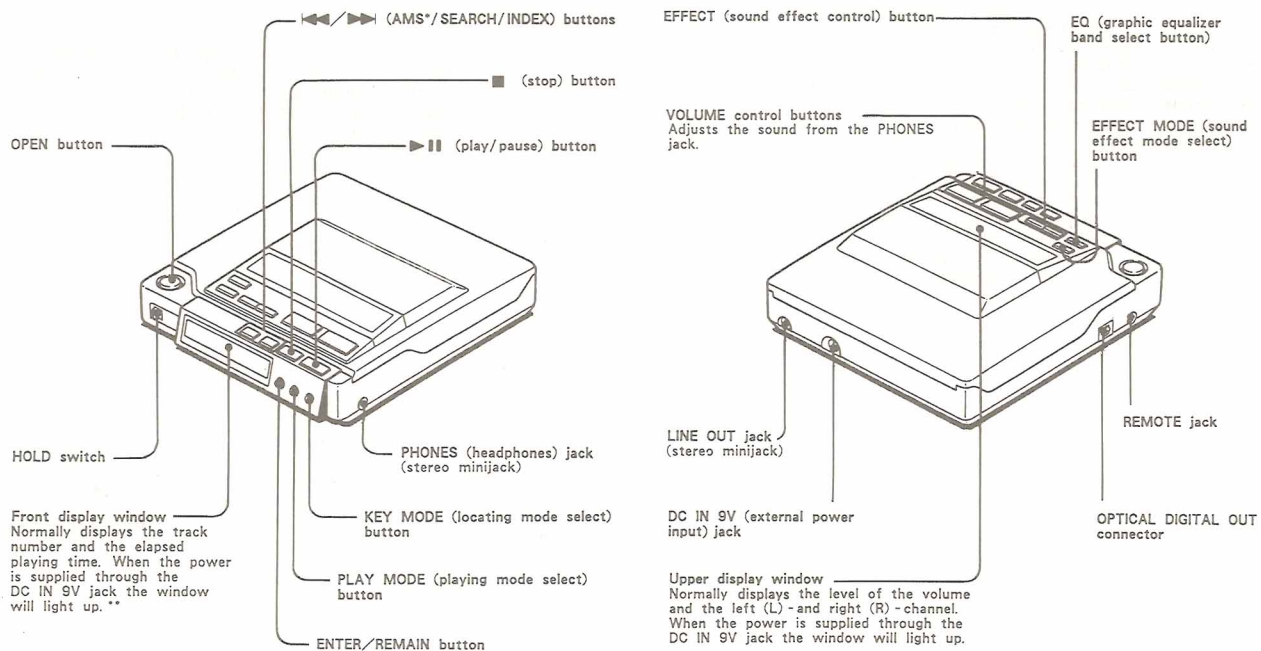
COMPACT DISC COMPACT PLAYER

SONY®



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SECTION 1
GENERAL

*AMS is the abbreviation of Automatic Music Sensor.

**If lit for a long time, the unit may become warm, but that is not a problem.

SECTION 2

SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

Flexible Circuit Board Repairing

1. Keep the temperature of the soldering iron at $270^{\circ} \pm 10^{\circ}\text{C}$ during repairing.
2. Do not touch the soldering iron more than 4 seconds or 3 times on the same conductor of the circuit board.
3. Do not apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.



Before Replacing the Optical Block

Please be sure to check thoroughly the parameters as per the "Optical Block Checking Procedures" (Part No.: 9-960-027-11) issued separately before replacing the optical block.

Note and specifications required to check are given below.

- FOK output: IC501 (9) pin
When checking FOK, remove the lead wire to disc motor and unsolder and open IC801 (24) pin.
- S curve P-to-P value: 2.95 Vp-p
- Adjusted part for focus gain adjustment: RV505
- RF signal P-to-P value: 0.75 – 1.4 Vp-p
- Traverse signal P-to-P value: 1.8 Vp-p
- The grating holder can not repair.
- Adjusted part for tracking gain adjustment: RV501

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe, from more than 30 cm away from the objective lens.

Laser Diode Check Procedure

The laser diode on this set will not emit unless the top panel is closed and S901 (leaf SW type) is turned on. The laser diode will always emit even if focus search is not performed in service mode. The laser diode is checked using the current value which flows to the laser diode inside the UPF.

Procedure 1 (service mode or normal operation)
Check the laser diode emission with the eye.

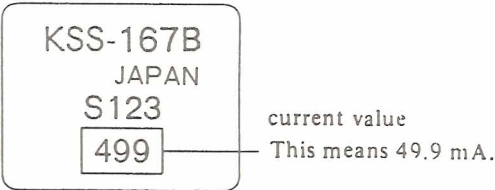
- 1. Open upper panel.
- 2. S901 on as Fig. 1.
(In service mode, this operation is not necessary.)
- 3. Press the ►|| key.
(In service mode, this operation is not necessary.)
- 4. Observe the objective lens and confirm that the laser diode is emitting light. At this time, the laser diode goes on about 10 seconds due to focus search. If it does not, APC circuit or UPF is defective.



Fig. 1 Turning S901 on

Procedure 2 (service mode or normal operation)
Check by the current with flows in the laser diode.

- 1. Close the top panel.
- 2. Remove the main board and read the current value on the label affixed to the UPF.
(Label on UPF)



The current value varies with the set.

- 3. Connect a VOM as shown in Fig. 2.
- 4. Press the ►|| key.
- 5. Calculate the current by the VOM reading.
VOM reading (V) ÷ 10 = current (A)
ex. VOM reading = 0.49 V
0.49 ÷ 10 = 0.049 (A) = 49 (mA)
- 6. Confirm that the ammeter reading is within the range given below.
value on label $\pm 5_{11}$ mA (25°C)
variation relative to temperature:
0.4 mA/°C
(Current increases when temperature rises and decreases when it drops.)
If the value is more than the range given, APC circuit has been defective or the laser diode has deteriorated. If it is less, APC circuit or UPF is defective.

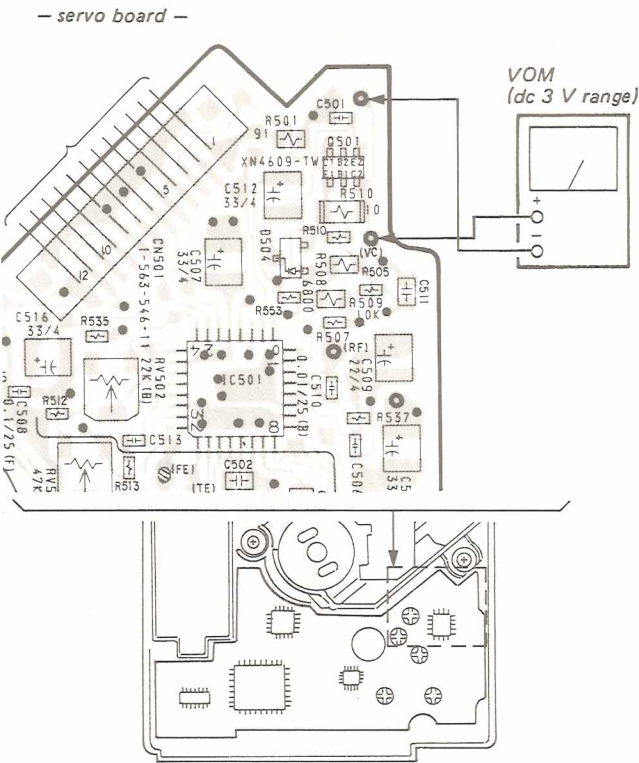


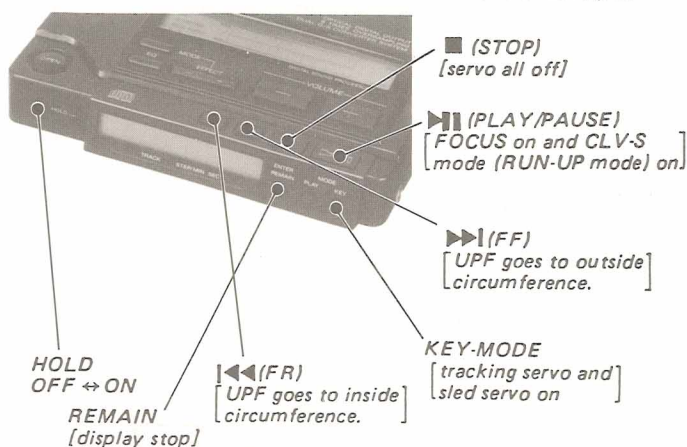
Fig. 2 VOM Connection

SERVICE MODE (service program)

This set has built-in service program in the micro-computer as usual sets.

The operation method of service program is explained below.

[]: Main operation in service mode for details, refer to step 2.



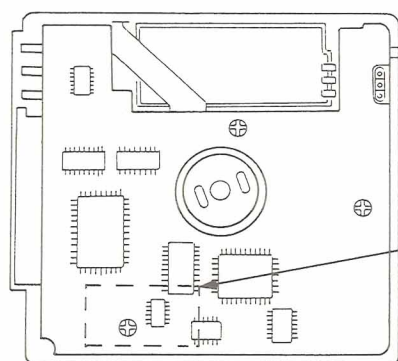
Be sure to set HOLD switch OFF.
If not key inputs can not be operated.

Fig. 3 Key Positions

Step 1 (Service Mode setting method)

1. Turn the HOLD switch OFF with the external power supply not plugged in (no power applied to set) and press the ▶▶|| key.
2. Solder jumper TEST point.
(IC801 pin ⑨ (BAT-E) pin is grounded).
3. Plug in external power supply.
This puts the set into service mode.

— main board —



TEST
point

Step 2 (Service Mode operation)

1. When service mode is set, the display will change 6 times, and those 6 changes will be repeated over and over.
With this the LCD display should be present in service mode. Even if LCD does not display, other operations will be performed.
2. When ▶▶|| or ◀◀ key is pressed, the UPF moves to the inside or outside circumference. Tracking servo and sled servo go off when this is done, so press KEY-MODE to turn on the tracking servo if necessary.
3. When REMAIN is pressed, the display stops. When REMAIN is released, the display continues to change. This allows check of each segment.
4. When ▶▶|| key is pressed, CLV-S (pull-in mode) starts while performing focus search. When there is no disc installed, focus search is repeated several times while disc motor is rotating.
5. When KEY-MODE is pressed, tracking servo, sled servo and CLV-A (servo during PLAY) go ON.
6. When 4 and 5 are performed, the disc begins to play. At this time, the top panel should be closed and S901 are to be ON.
7. All servo (focus, tracking, sled and spindle) go off when ■ key is pressed. But disc motor continues rotating for a while by inertia.

Step 3 (Service Mode release)

1. First be sure to unplug the external power supply, then remove the TEST point solder jumper.
2. The set will now operated normally.

TEST
Solder jumper for service mode.
(After checking or adjusting in service mode,
be sure to remove this solder jumper.)

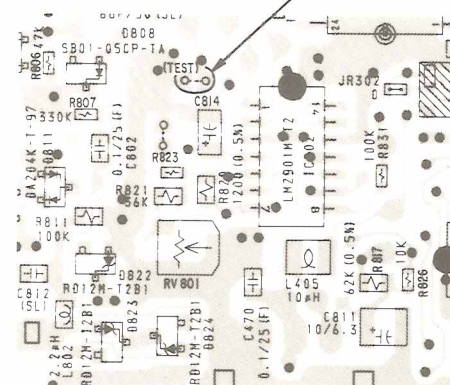


Fig. 4 TEST Point Position

SECTION 3

ELECTRICAL ADJUSTMENTS

Notes on Adjustment

1. Perform adjustments except for RECHARGEABLE VOLTAGE ADJUSTMENT and BATTERY DISPLAY ADJUSTMENT in service mode. Be sure to release service mode after completing adjustment.
(Refer to "Service Mode (service program)" on page 5.)
2. Perform adjustments in the order given.
3. Use YEDS-18 disc (part No.: 3-702-101-01) unless otherwise indicated.
4. Power supply voltage: DC 9 V
HOLD switch: OFF

PREPARATION

Put the set into service mode (see page 5) and perform the following checks. Repair if there are any abnormalities.

• Sled Motor Check

1. Press the OPEN button and open the top panel.
2. Press the ►►, ◄◄ keys and make sure that the UPF moves smoothly, without catching, from the inmost → outmost → inmost circumference.

►► : UPF moves outward

◄◄ : UPF moves inward

• Focus Search Check

1. Press the OPEN button and open the top panel.
2. Press the ►■■ key. (Focus search is performed continuously.)
3. Observe the UPF objective lens and check that it moves smoothly up and down with no catching or noises.
4. Press the ■ key.

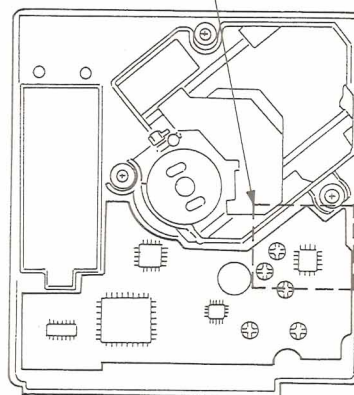
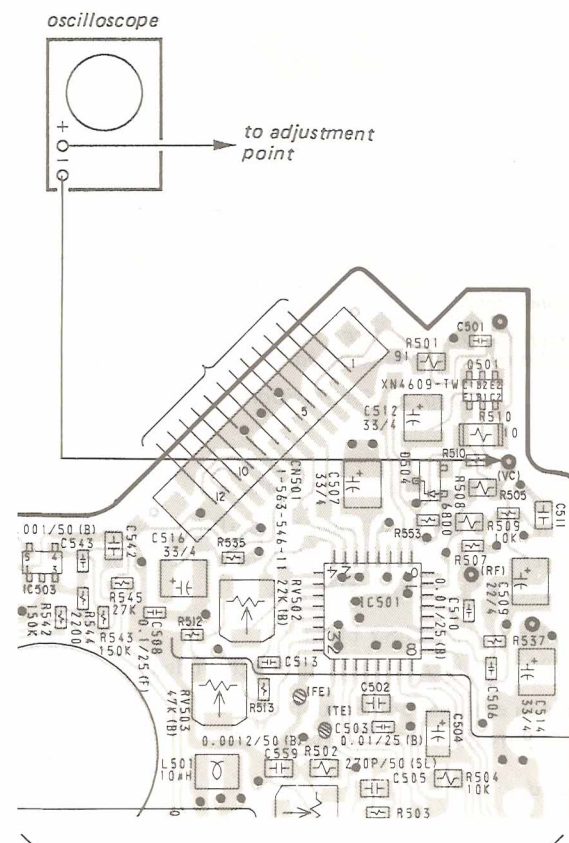
Check that focus search operation stops. If it does not stop, press the ■ key again longer than before. But disc motor continues rotating for a while by inertia.

VC (1/2 Vcc) Connecting Point

FOCUS BIAS ADJUSTMENT

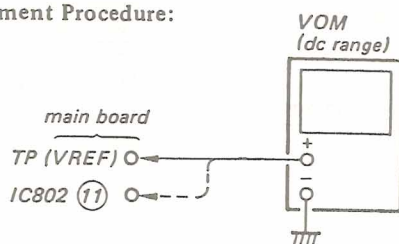
TRACKING BALANCE ADJUSTMENT

When the adjustments above are performed, connect the ⊖ side of oscilloscope to the point below.



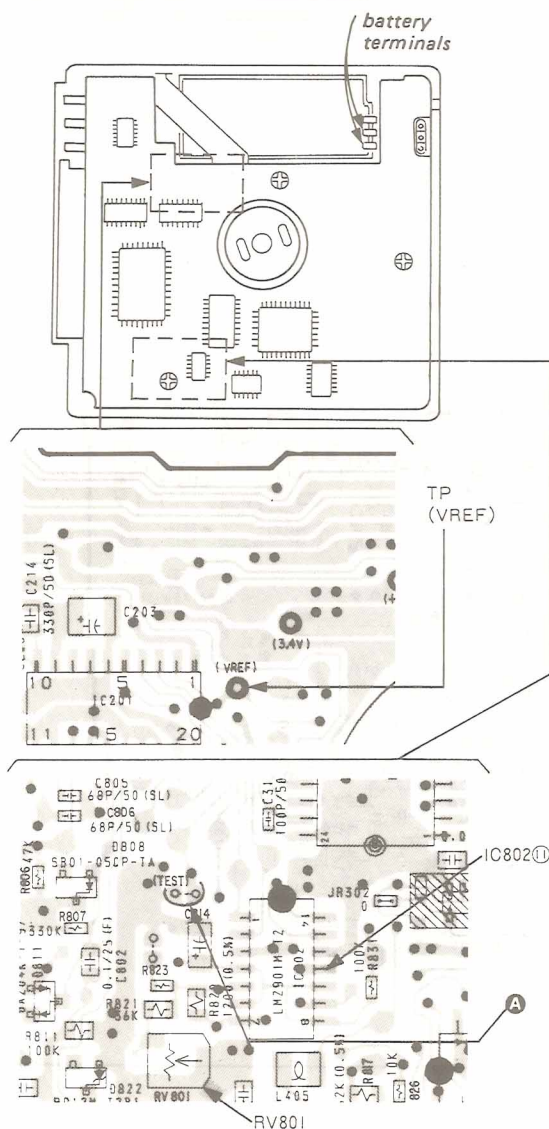
Battery Display Adjustment

Adjustment Procedure:



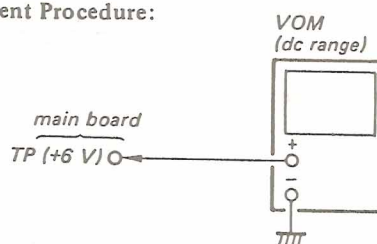
1. Apply dc +3.5 V to terminals for built in battery (BP-2).
2. Insert the disc (YEDS-18) and put the set into play mode.
3. Adjust RV801 so that main board IC802 (11) voltage and TP (VREF) voltage are equal.
4. If IC802 (11) voltage is higher than TP (VREF) voltage when turning the RV801 fully counter-clockwise, short the jumper point (A) as shown below and adjust RV801.

Adjustment Location: main board



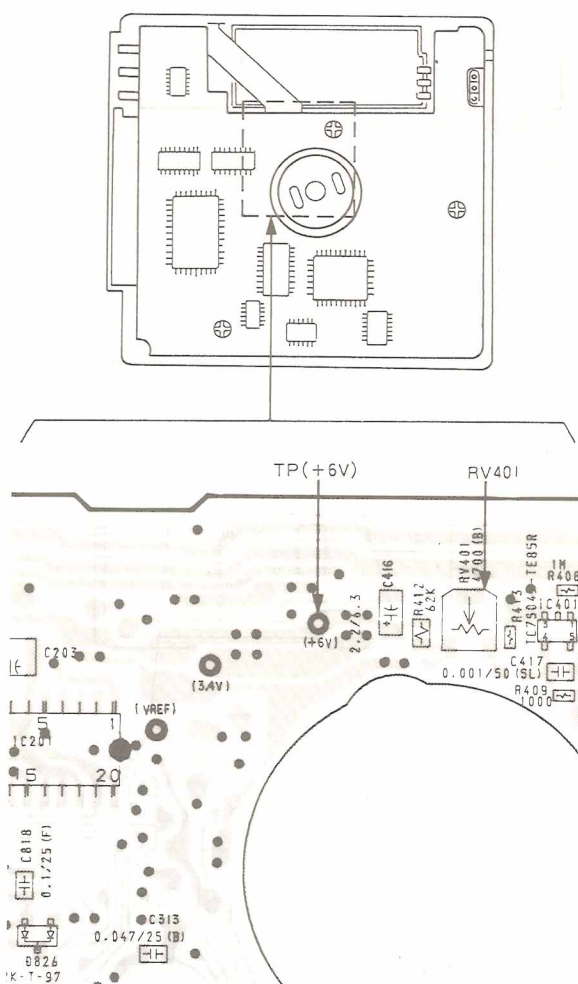
+6 V Adjustment

Adjustment Procedure:



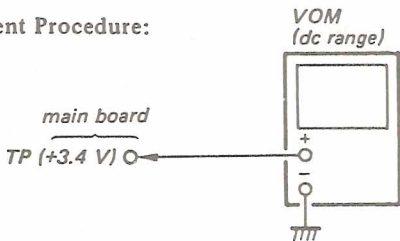
1. Put the set into service mode (see page 5).
2. Connect the VOM to main board TP (+6 V).
3. Adjust RV401 for +6 \pm 0.1 V reading on the VOM.
4. After adjustment, release service mode (see page 5).

Adjustment Location: main board



+3.4 V Adjustment

Adjustment Procedure:



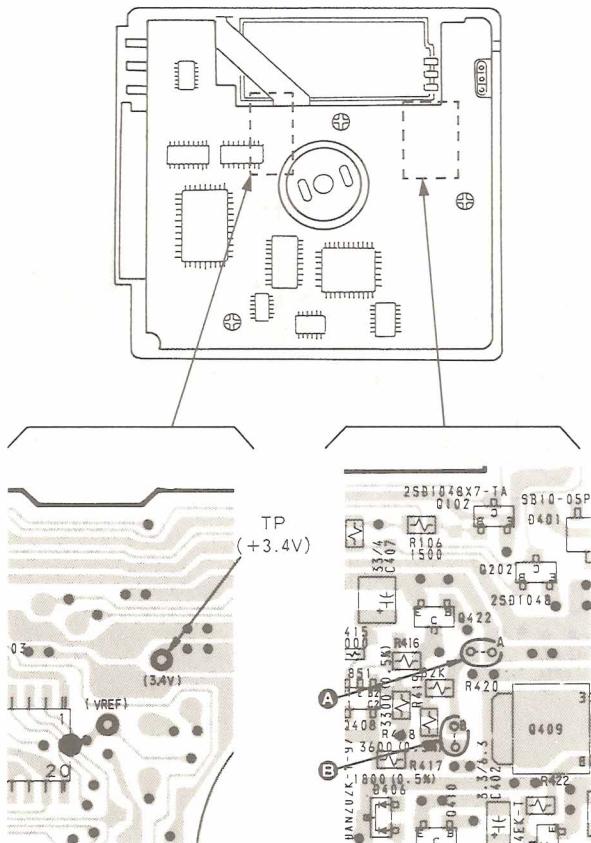
- 1. Put the set into service mode (see page 5).
- 2. Connect the VOM to main board test point TP (+3.4 V).
- 3. Adjust the pattern connecting (A or B) to obtain 3.4 to 3.55 V reading on the VOM.

pattern connection		VOM reading
A	B	
○	X	down ↑ up
X	X	
X	○	
○	○	

○: short X: open

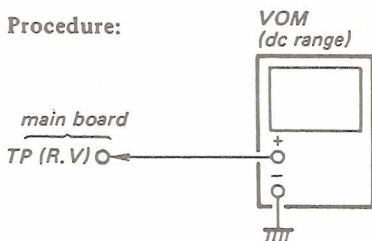
- 4. After adjustment, release service mode (see page 5).

Adjustment Location: main board



Rechargeable Voltage Adjustment

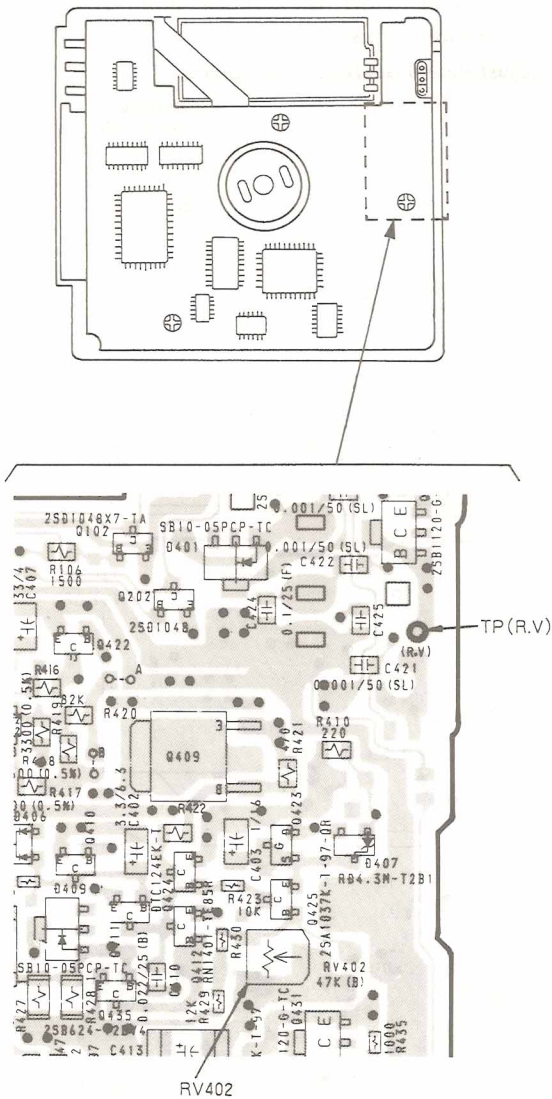
Adjustment Procedure:



- 1. Connect the VOM to main board test point TP (R.V).
- 2. Apply DC 9 V with requarated dc power supply from external power jack CN401.
- 3. Adjust RV402 for 7.05 – 7.5 V reading on the VOM.

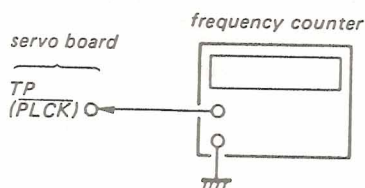
Note: Measure after the VOM reading becomes stable.

Adjustment Location: main board



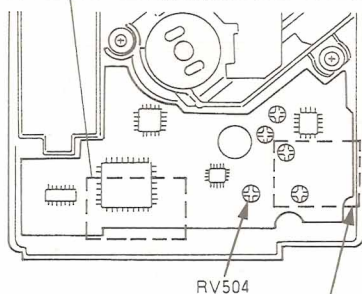
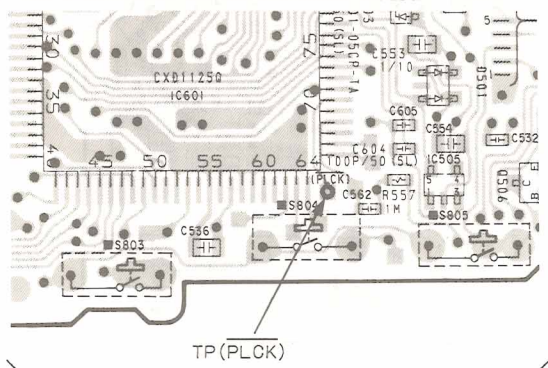
PLL Free Run Frequency Check and Adjustment

Check/Adjustment Procedure:

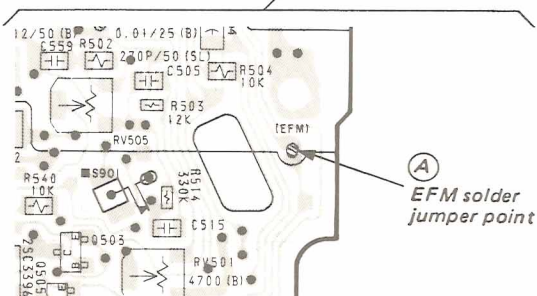


1. Disconnect the jumper point (A) (EFM) in the diagram below.
2. Connect a frequency counter to servo board test point TP (PLCK).
3. Put the set into service mode (see page 5).
4. Check that the frequency counter reading is 4.3218 ± 0.01 MHz. If not, adjust RV504 so that it is 4.3218 ± 0.01 MHz.
5. After adjustment, release service mode (see page 5).
6. Short the jumper point shorted in step 1.

Check/Adjustment Location: servo board



(A) EFM solder jumper point
(Disconnect for checking and adjustment. Short after checking and adjustment.)



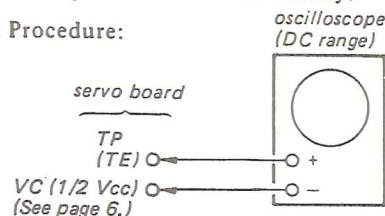
(A) EFM solder jumper point

Tracking Balance Adjustment

Conditions:

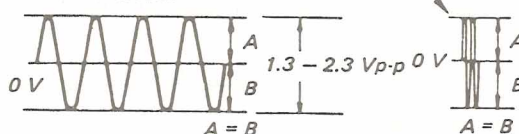
The set should be placed either horizontally.

Adjustment Procedure:



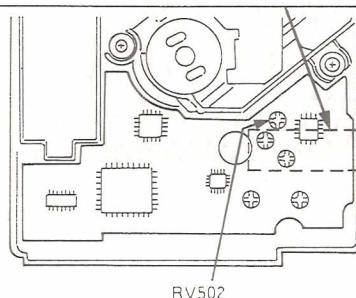
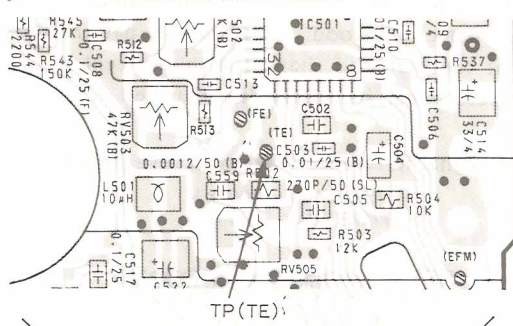
1. Connect the oscilloscope to servo board TP (TE).
2. Put the set into service mode (see page 5).
3. Press the ►► and ◄◄ keys to move the UPF to the center.
4. Insert the disc (YEDS-18) and close the top panel.
5. Press the ►► key.
(It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.)
6. Adjust RV502 so that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0 V.

Note: Take sweep time as long as possible to obtain best waveform.



7. Unplug the external power supply to stop spindle motor from rotating.
8. After adjustment, release service mode (see page 5).

Adjustment Location: servo board



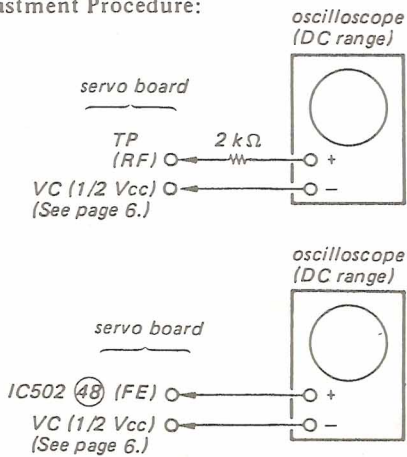
RV502

Focus Bias Adjustment

Conditions:

The set should be placed either horizontally.

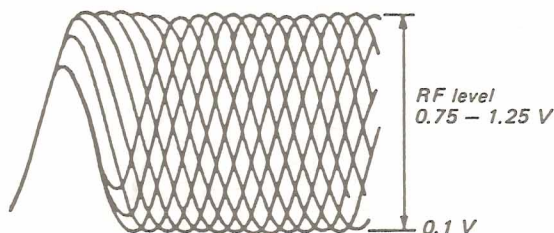
Adjustment Procedure:



1. Put the set into service mode (see page 5).
2. Connect the oscilloscope to servo board test point TP (RF).
3. Press the ►► and ◄◄ keys to move the UPF to the center. (Move the UPF to the music area on the disc to enable easy visibility of the eye pattern).
4. Insert the disc (YEDS-18) and close the top panel.
5. Press the ►■ key.
(It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.)
6. Press the KEY-MODE button. (Tracking and sled go ON.)
7. Adjust RV503 so that the oscilloscope waveform eye pattern is good. A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.

• RF Signal Reference Waveform (eye pattern)

VOLT/DIV: 200 mV
TIME/DIV: 500 nS



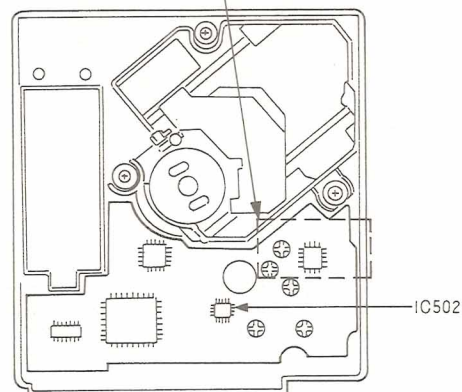
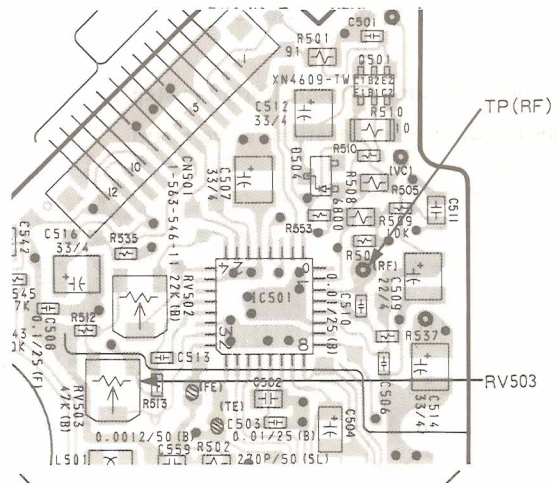
When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

8. Push the ■ (STOP) button spindle motor from rotating and remove the disc.
9. Remove the disc and connect the oscilloscope to main board IC502 (48) (FE).
10. Adjust RV503 again referring to the table followed.

oscilloscope reading	adjustment
more than +50 mV	Not adjust again.
+50 mV ~ +20 mV	Adjust RV503 again for +50 mV reading on oscilloscope.
+20 mV ~ -20 mV	Adjust RV503 again for -20 mV reading on oscilloscope.
less than -20 mV	Not adjust again.

11. After adjustment, release service mode (see page 5).

Adjustment Location: servo board



Focus/Tracking Gain Adjustment

A frequency response analyzer or CD jig is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up followup (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate. However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is high, the noise when the 2-axis device operates increases.
- When gain is low, it is more susceptible to mechanical shock and skipping occurs more easily.

This adjustment is to be performed when replacing the following parts:

- optical pick-up block
- RV505 (focus gain VR)
- RV501 (tracking gain VR)

Be careful not to move RV505 (focus gain volume) and RV501 (tracking gain volume) ordinarily.

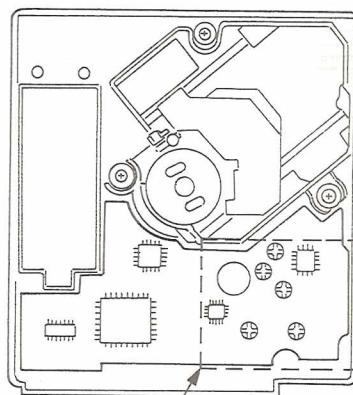
On this set, it is very difficult to simplify this adjustment. For those sets on which symptoms such as "occasional skipping" are hard to discover, or it is hard to tell if the set has been repaired, use the CD jig and perform this adjustment. Refer to the diagram below for connection of the CD jig. The adjustment procedure is described in the separate CD Jig Instruction Manual.

CD Jig Connecting Procedure:

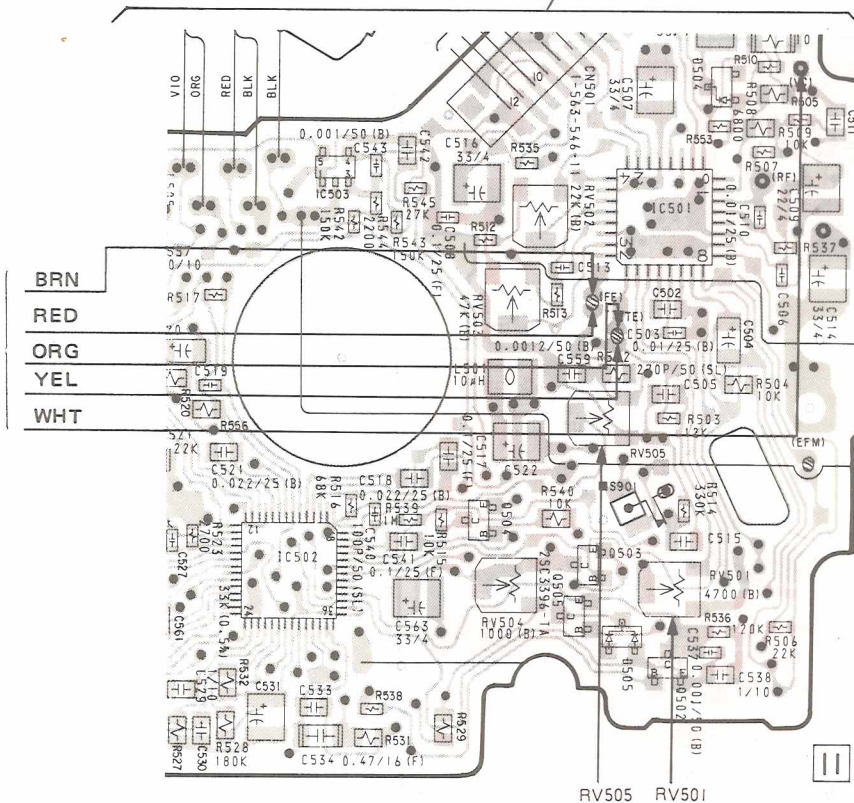
Remove the solder jumpers at the TE and FE locations and connect the DC jig.

(Connect the points on both TE and FE located on the side of IC501 to the output to the CD jig, and points located on the side of volumes to the input from the CD jig.)

— servo board —

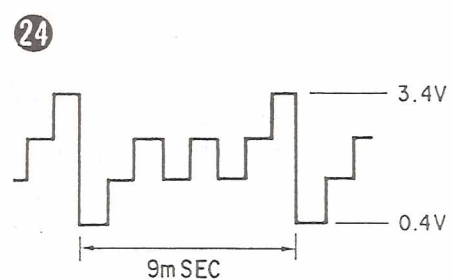
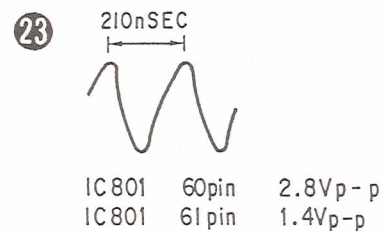
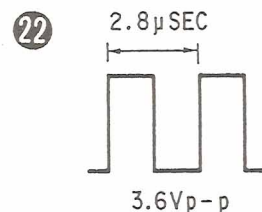
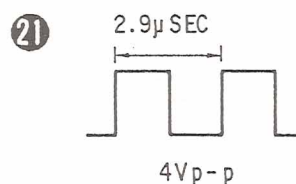
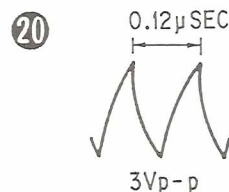
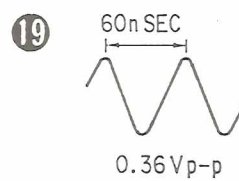
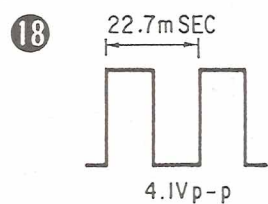
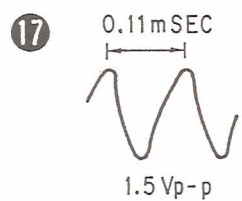
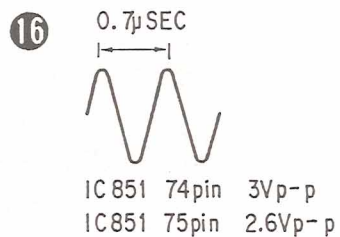
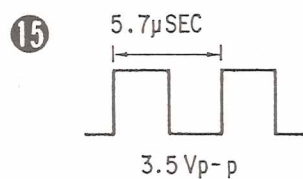
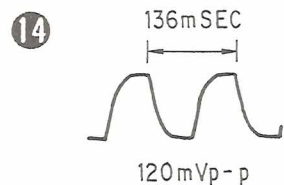
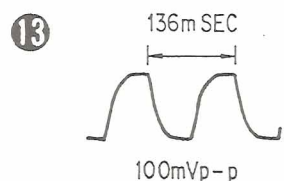
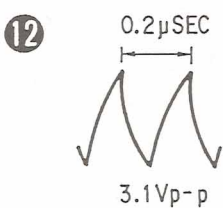
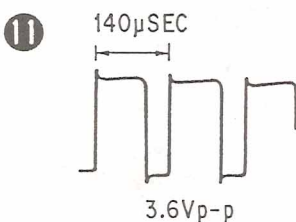
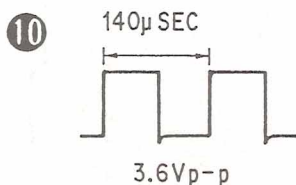
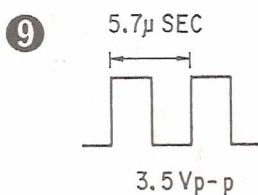
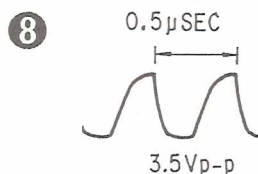
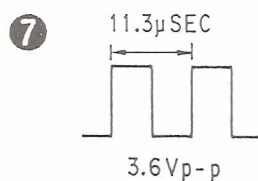
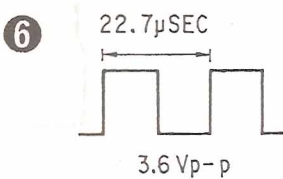
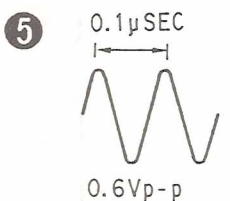
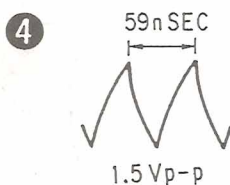
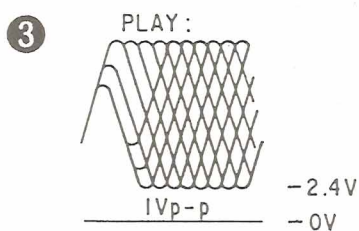
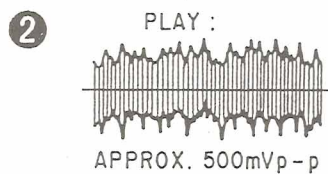
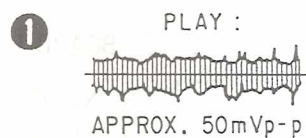


CD jig

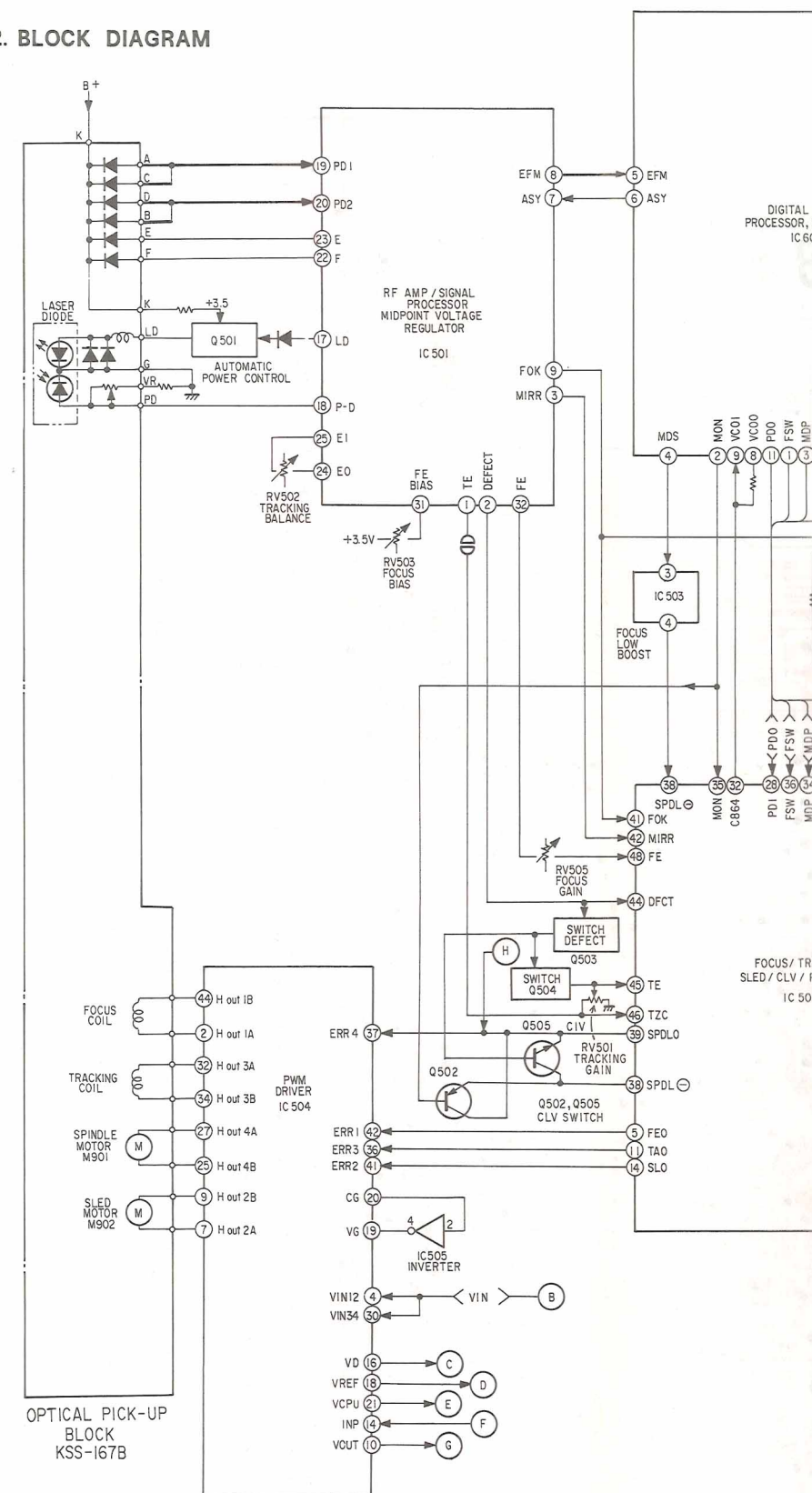


4-1. WAVEFORMS

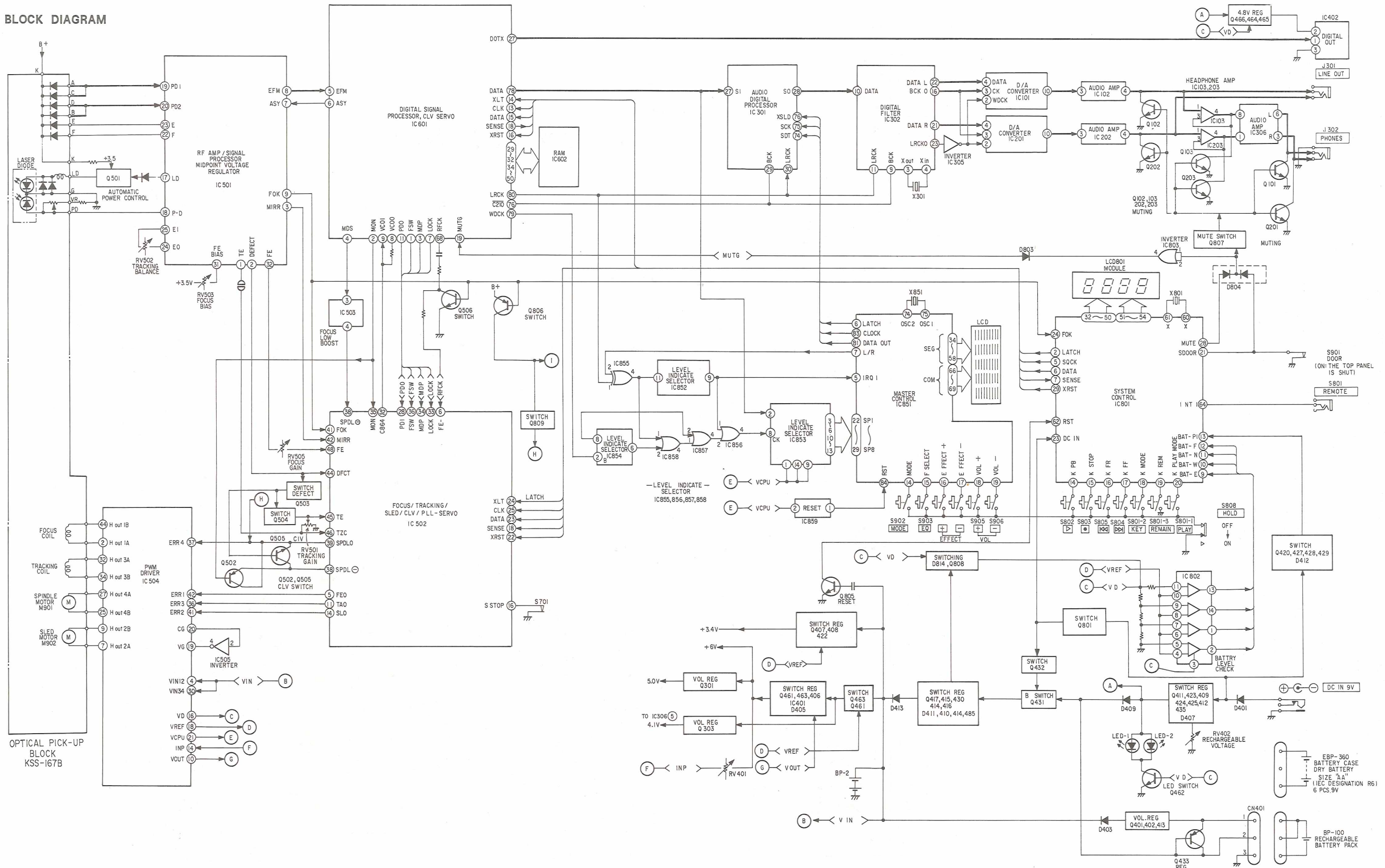
4-1. WAVEFORMS

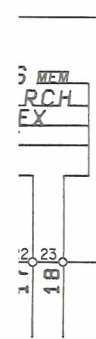


4-2. BLOCK DIAGRAM

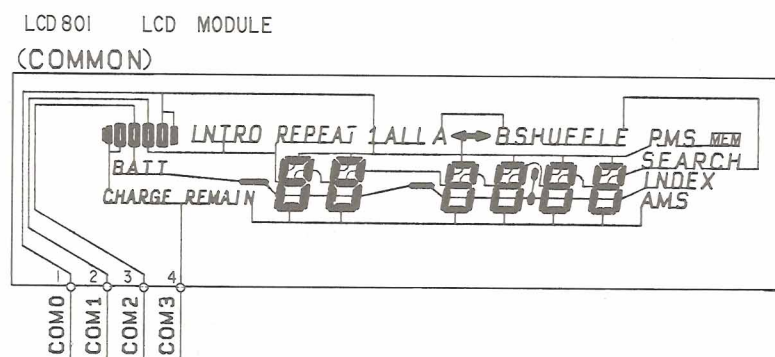


4-2. BLOCK DIAGRAM

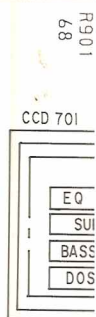




【 MAIN BOARD 】 (SIDE A)



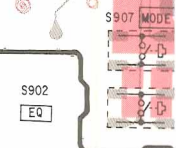
【 LED - 2 BOARD 】

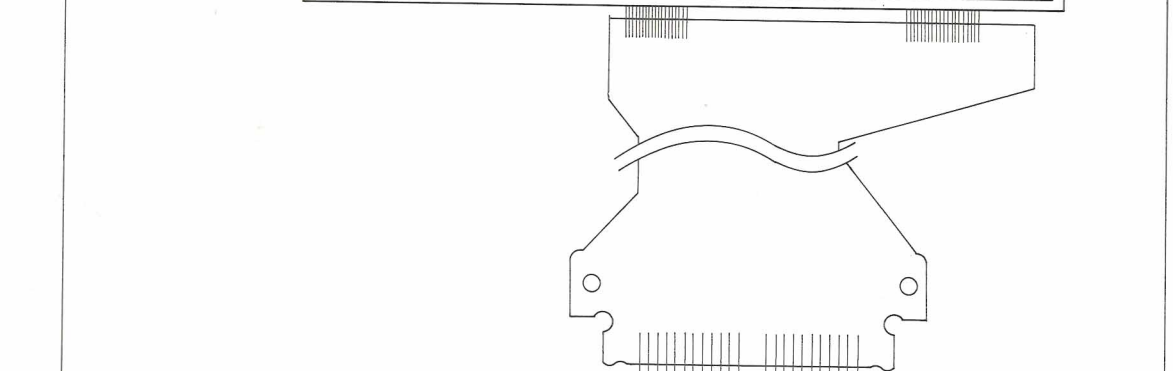
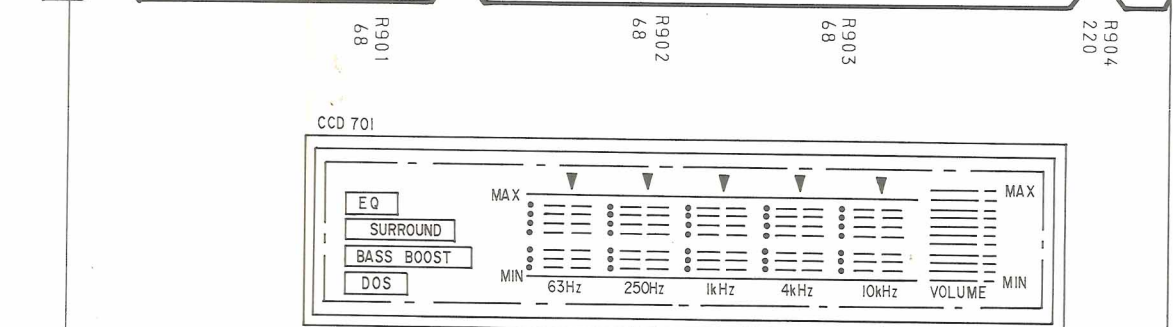
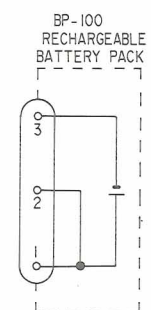


【LED-1】
BOARD



【KEY BOARD





- See page 31 for IC block diagram.



Note:

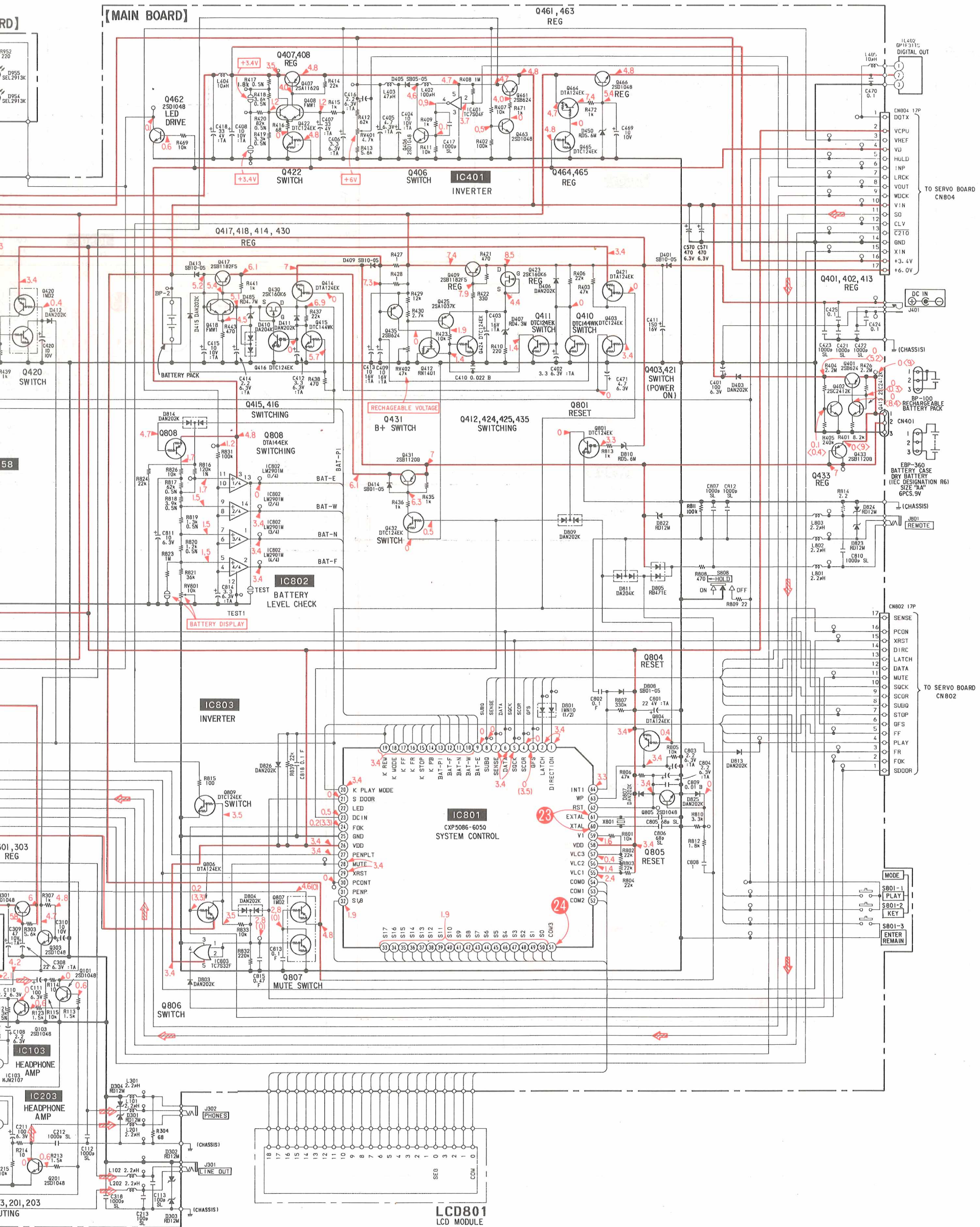
- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- % : indicates tolerance.

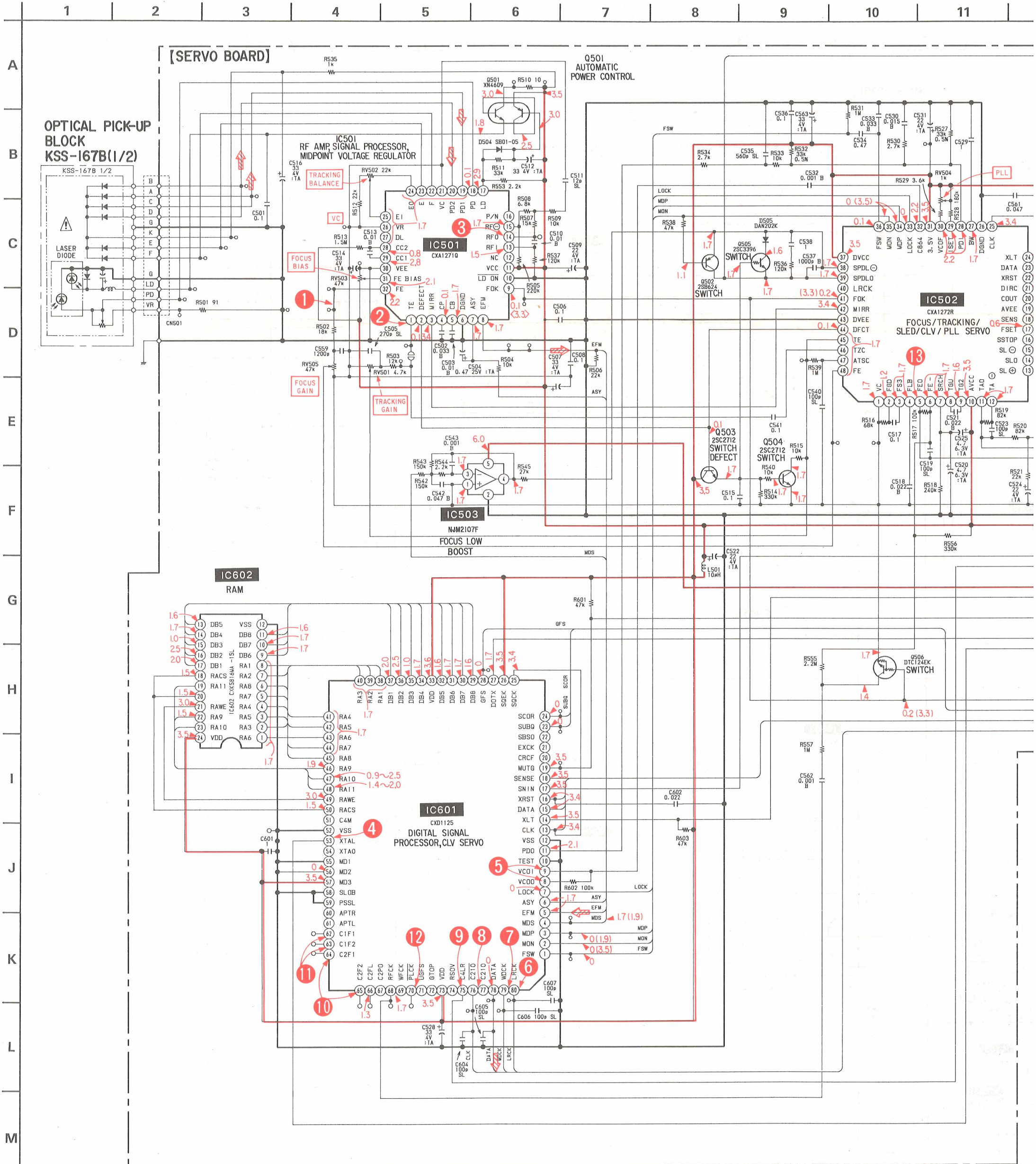
Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

- — : B+ Line
- — : adjustment for repair.

- Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
- no mark : stop
- () : play
- < > : values when a power supply of 9V dc supplied from the battery terminal.
- Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$).
- Circled numbers refer to waveforms.
- Signal path.
- CD

10 11 12 13 14 15 16 17 18 19 20





12

13

14

15

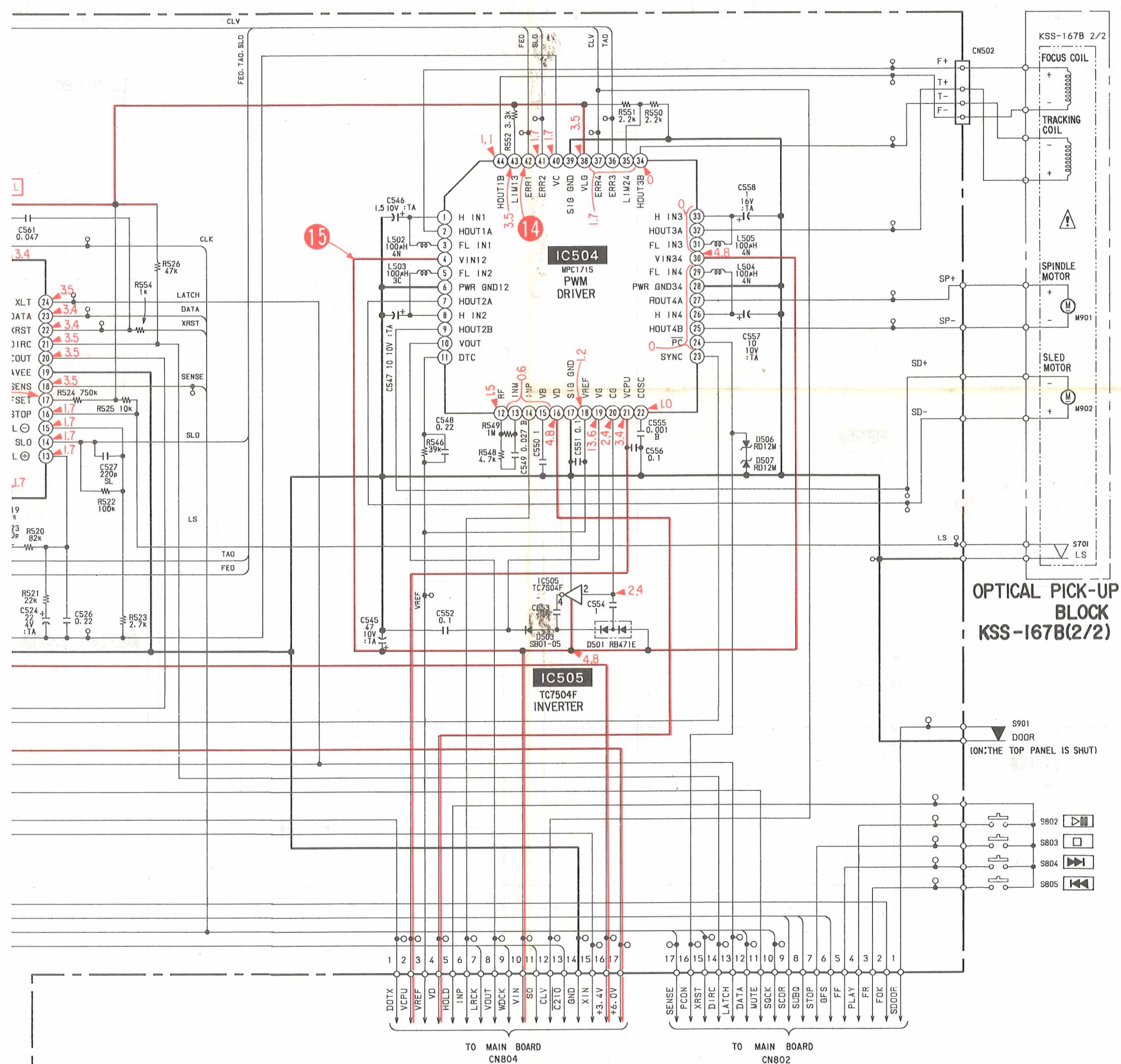
16

17

18

19

20



Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50V or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- % : indicates tolerance.

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

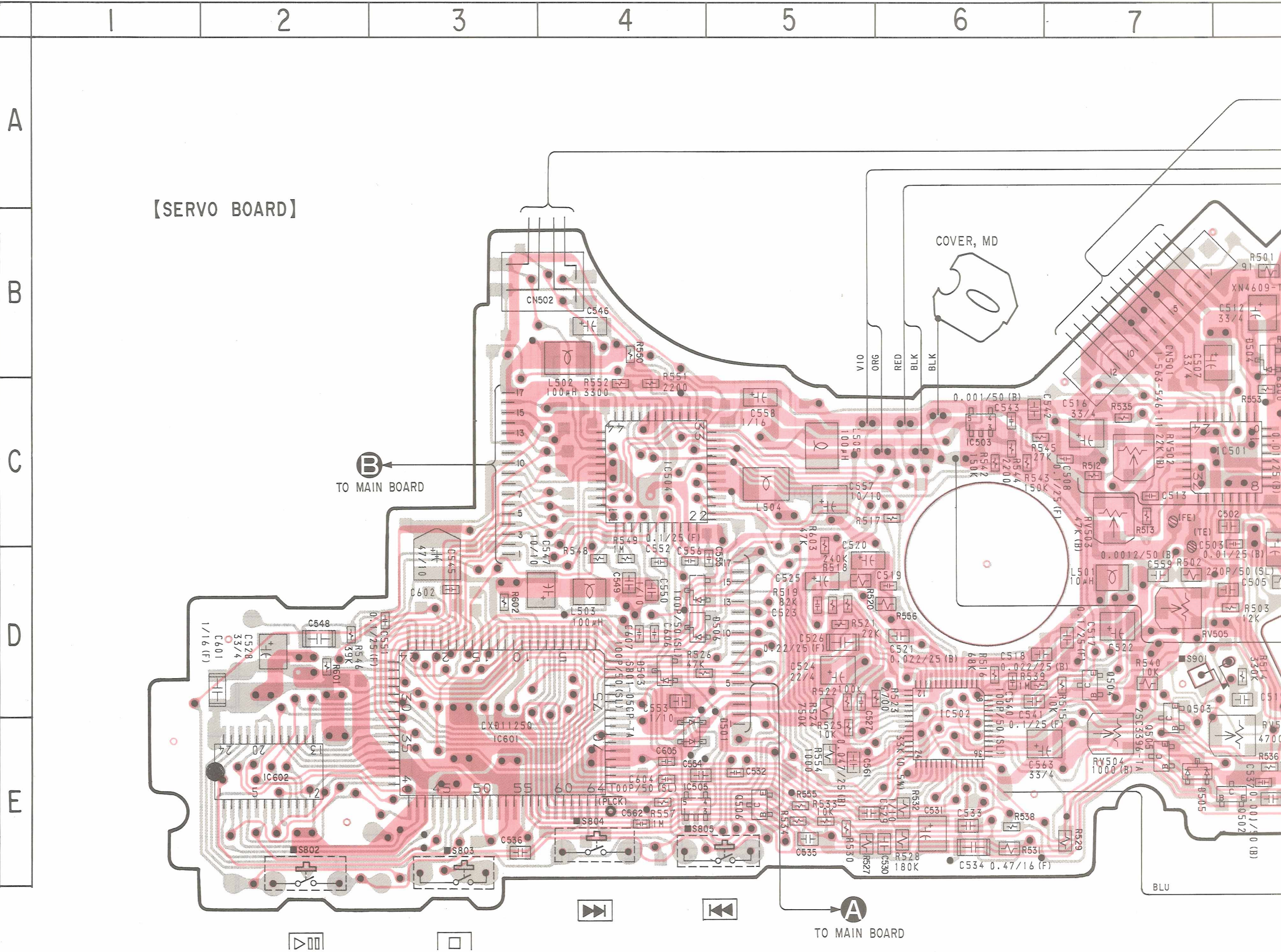
- — : B+ Line
- — : adjustment for repair.
- Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
- no mark : stop
- () : play
- < > : values when a power supply of 9V dc supplied from the battery terminal.
- Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$).
- Circled numbers refer to waveforms.
- Signal path.
- CD

• Semiconductor Location

Ref. No.	Location
D501	E-4
D503	D-4
D504	B-8
D505	E-7
D506	D-4
D507	D-4
IC501	C-8
IC502	D-6
IC503	C-6
IC504	C-4
IC505	E-4
IC601	D-3
IC602	E-2
Q501	B-8
Q502	E-8
Q503	D-7
Q504	D-7
Q505	E-7
Q506	E-5

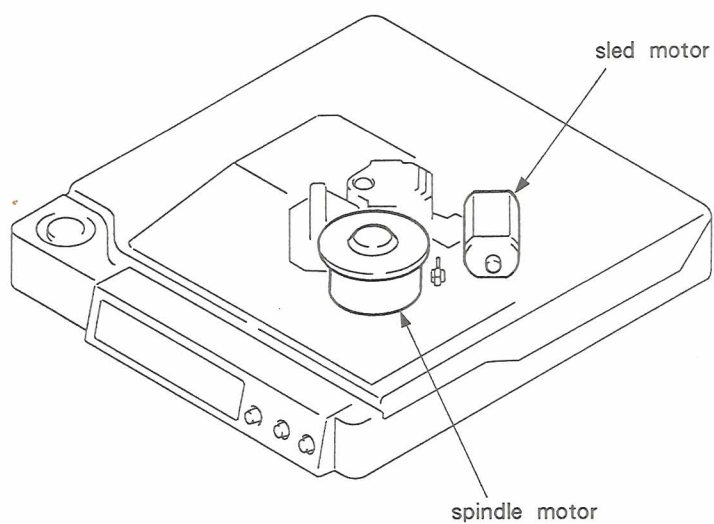
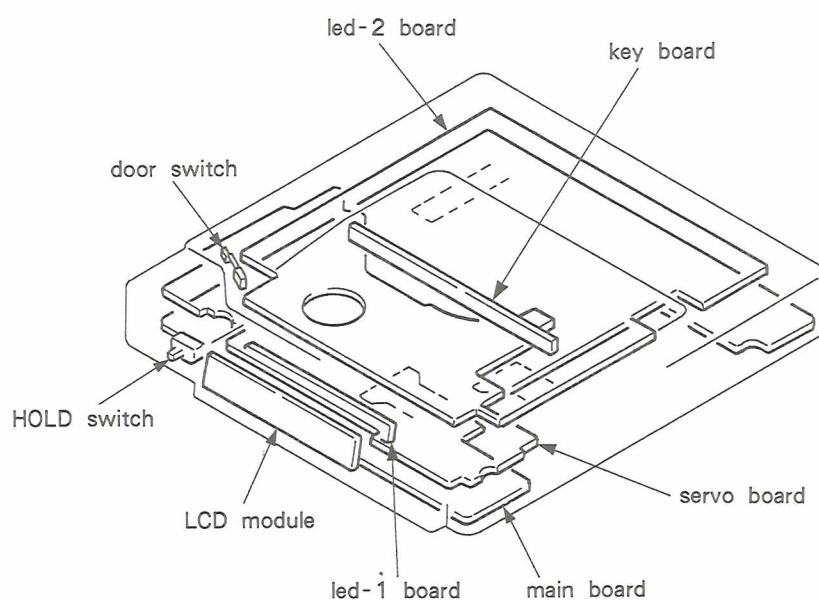
Note:

- : Through hole.
- : Pattern on the side which is seen.
- : Pattern of the rear side.



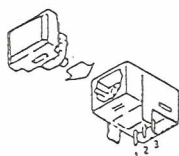


• CIRCUIT BOARD LOCATION



• Semiconductor Lead Layouts

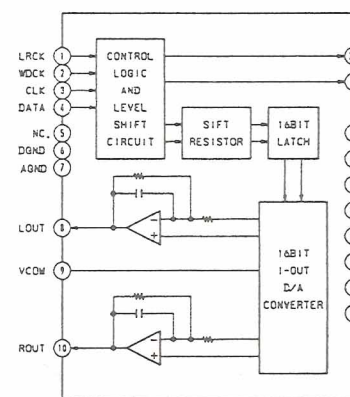
GP1F31T



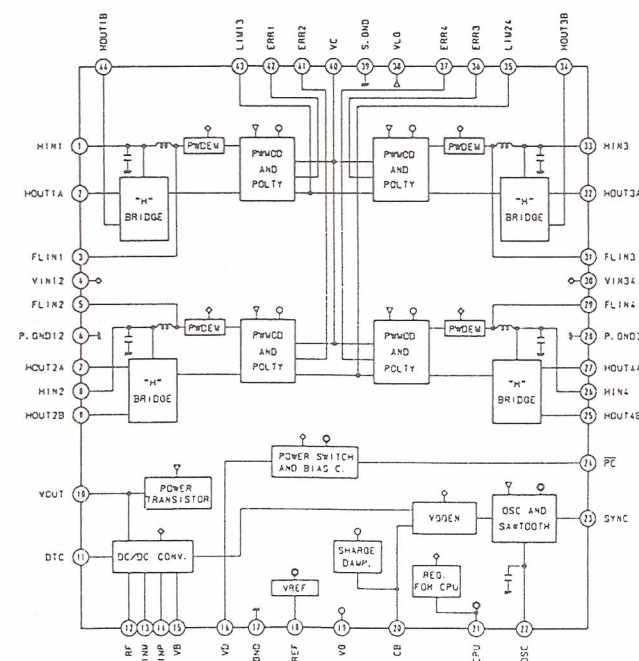
SEL2913K-D



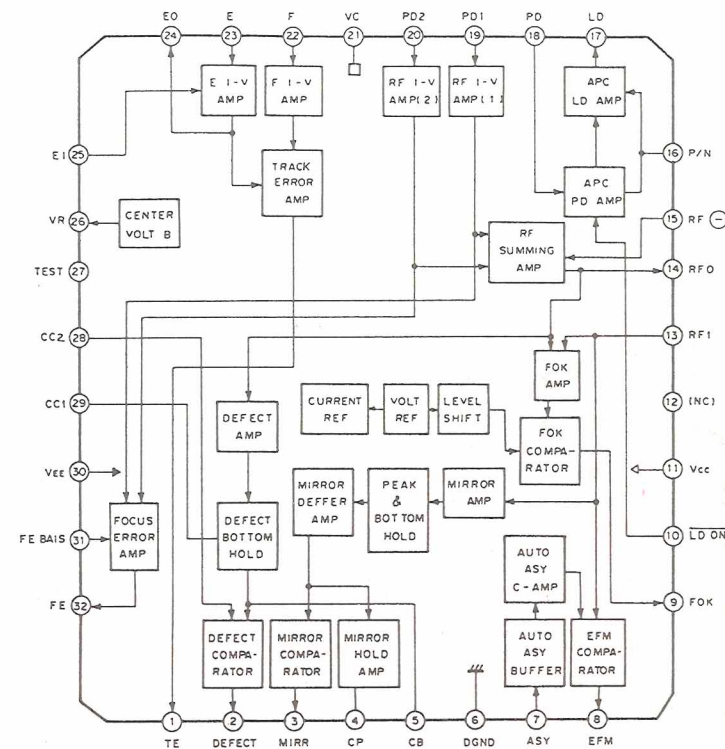
IC101, 201
PCM-66PJ



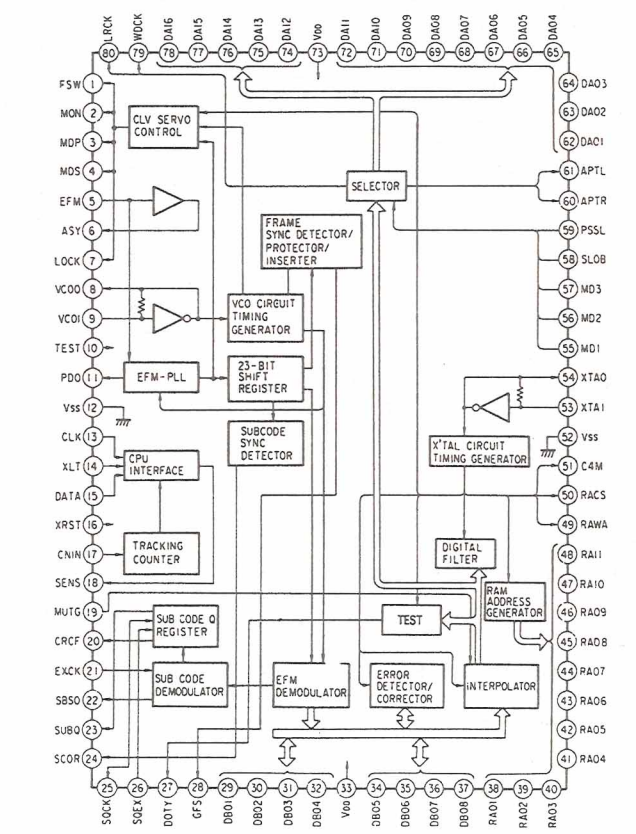
IC504
MPC1715



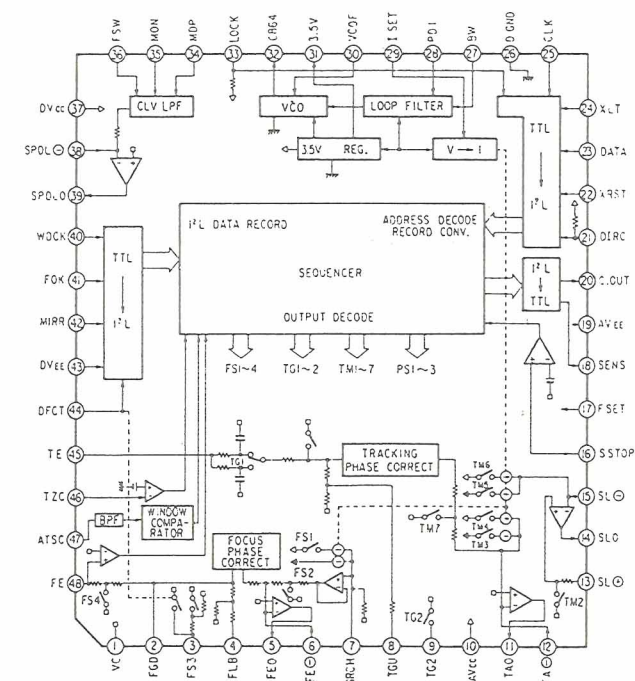
IC501
CXA1271Q



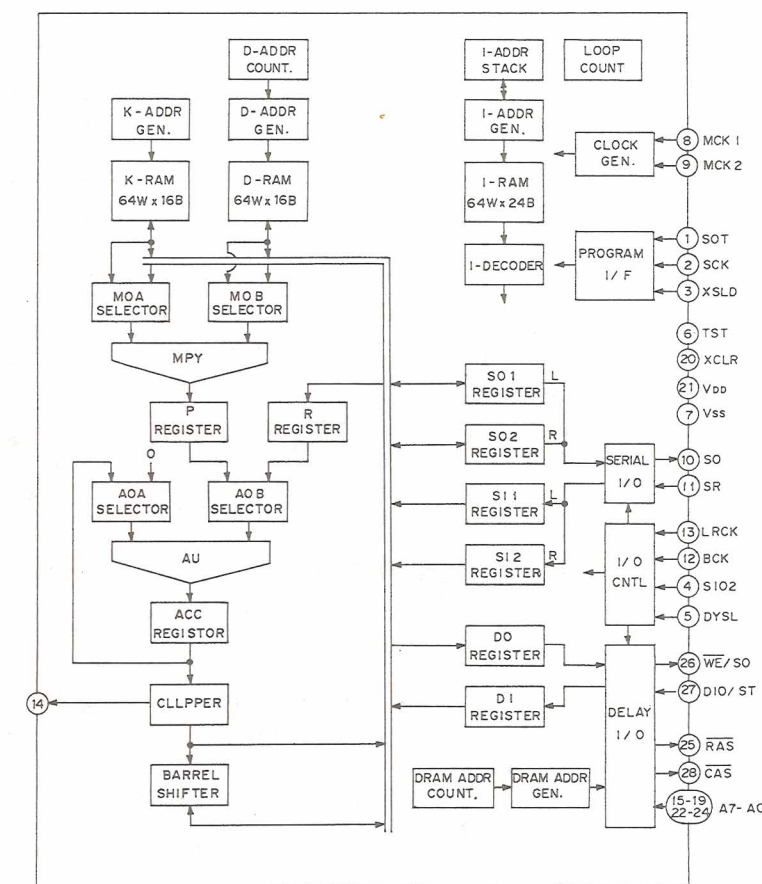
IC601
CXD1125Q



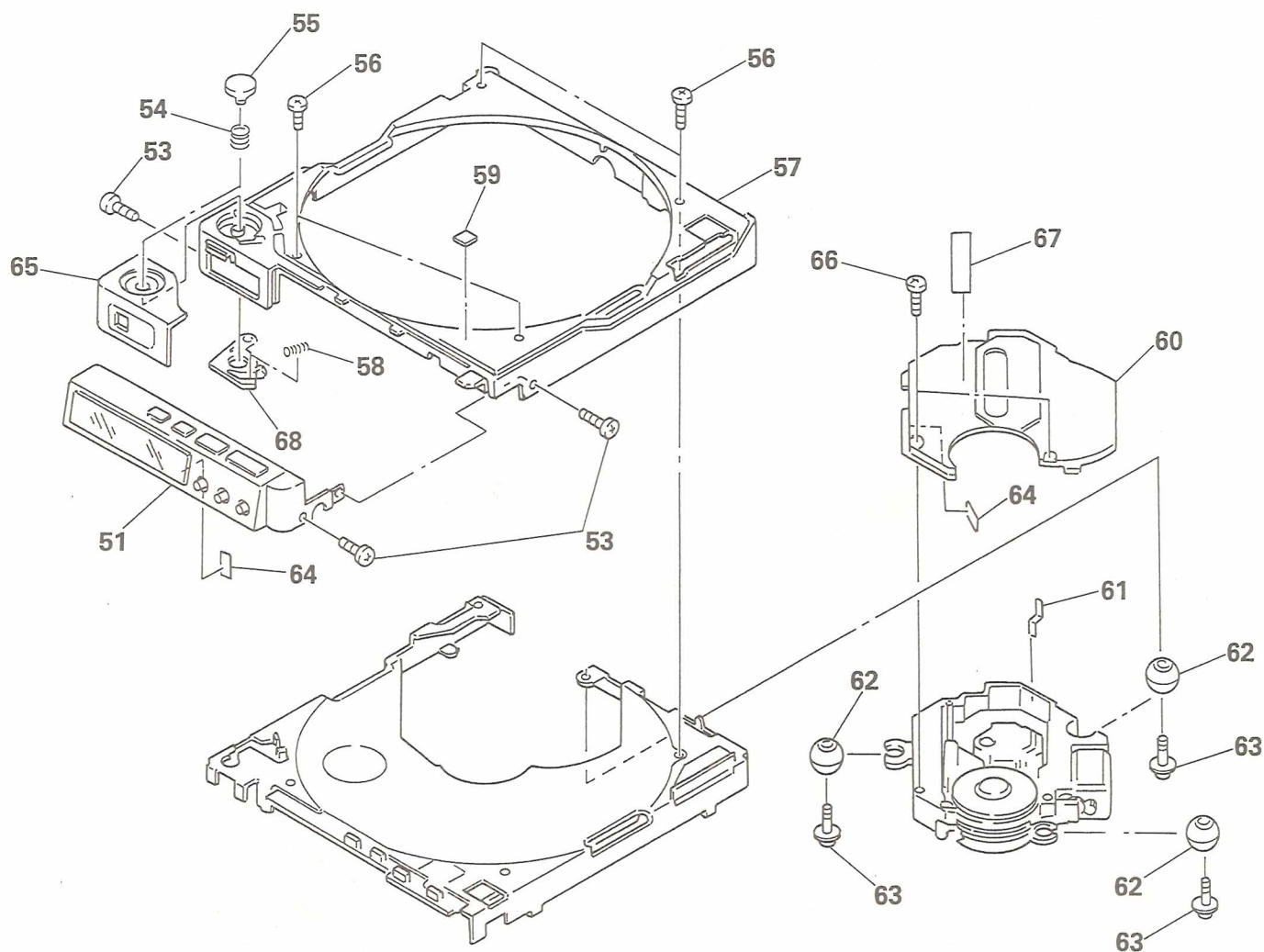
IC502
CXA1272R



IC301
CXD1160AQ

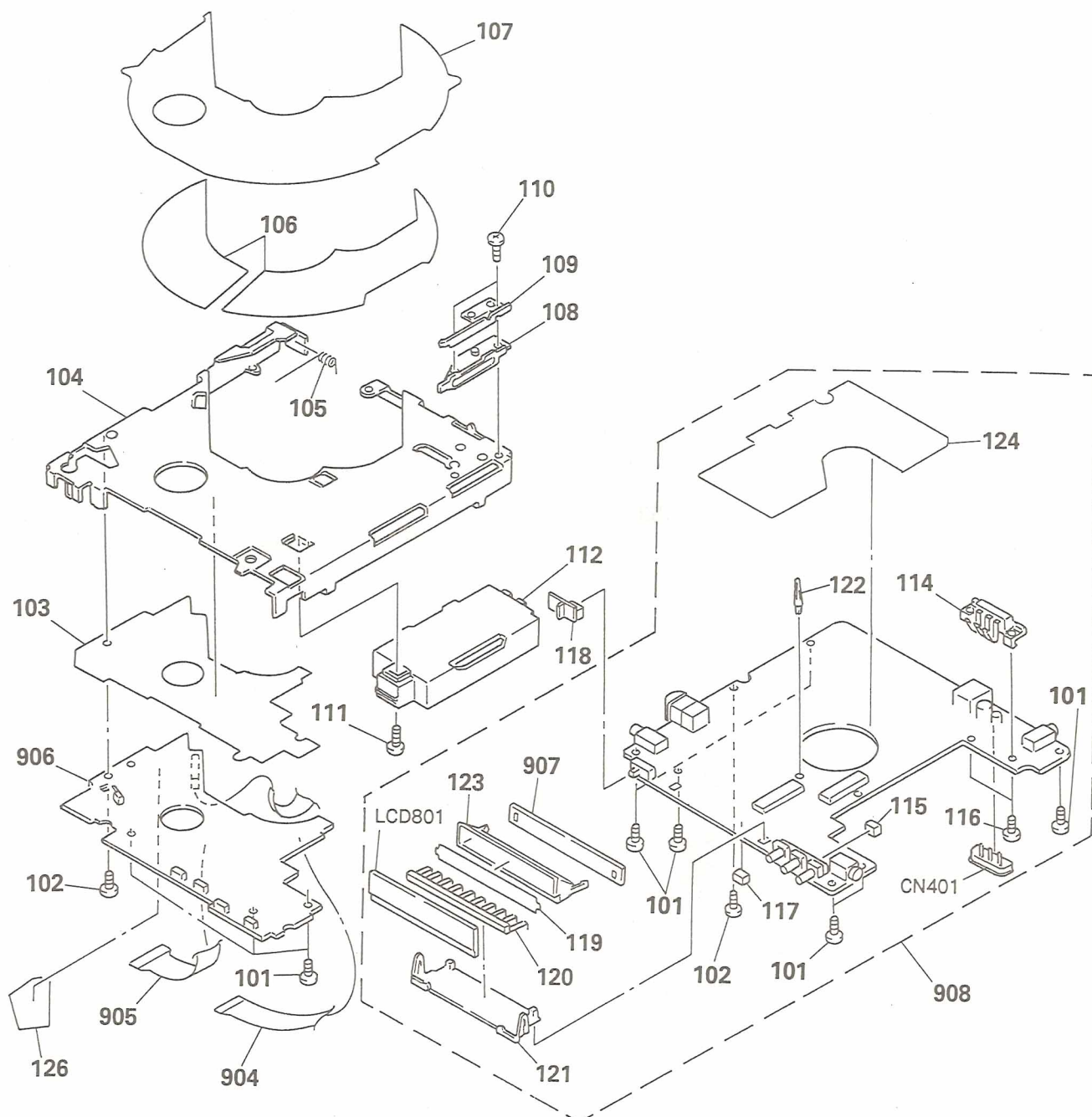


5-2. CHASSIS SECTION (1)



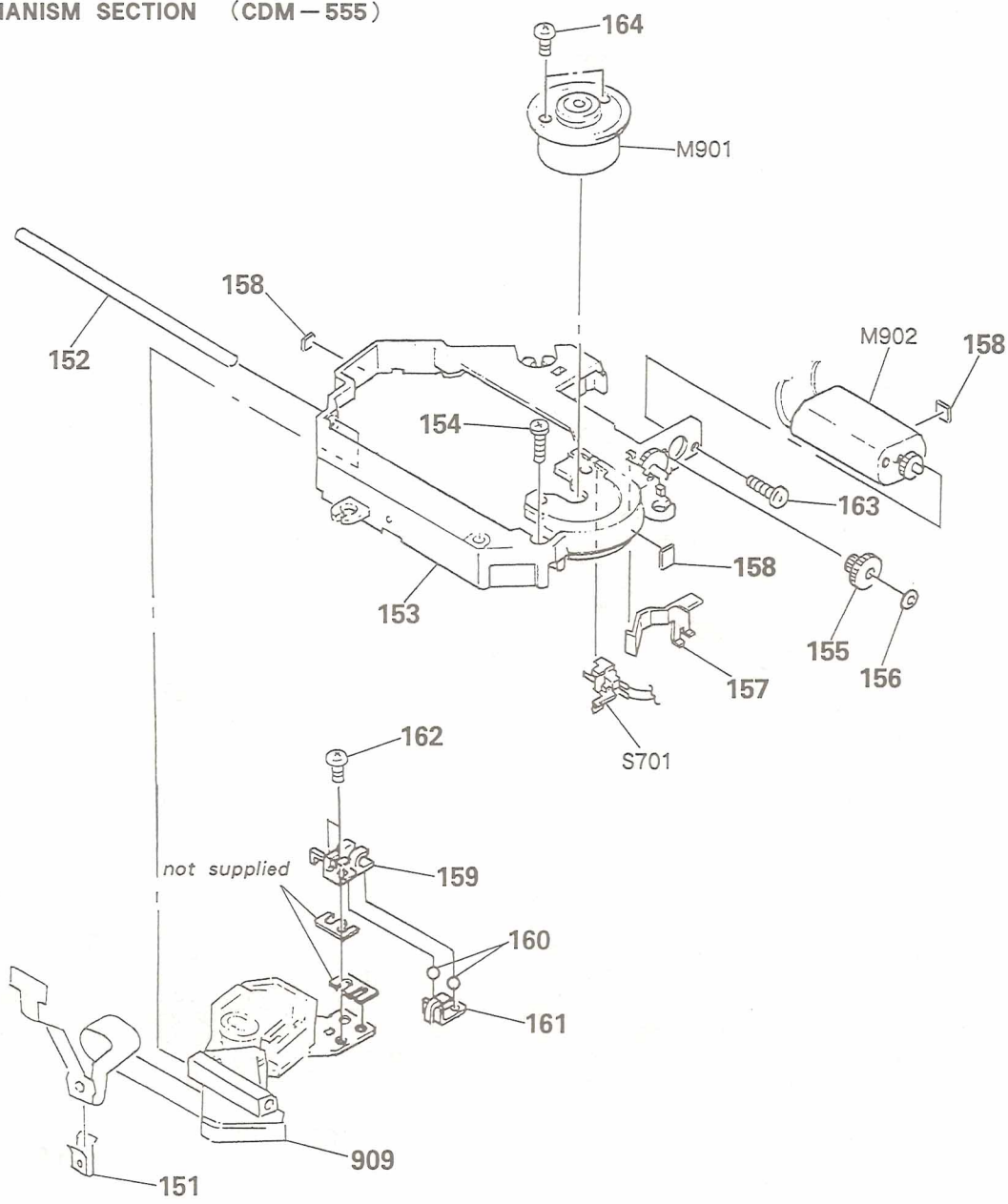
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	X-4921-245-1	PANEL (M) ASSY, FRONT		60	4-926-141-01	COVER, MD	
53	3-703-816-72	SCREW (M1.4X3.0), SPECIAL HEAD		61	3-831-441-XX	CUSHION	
54	4-917-727-01	SPRING, COMPRESSION		62	X-4917-723-1	DAMPER	
55	4-924-130-31	BUTTON, OPEN		63	4-920-209-01	SCREW (INSULATOR), STEP	
56	3-703-816-22	SCREW (M1.4X5.0), SPECIAL HEAD		64	9-911-838-XX	CUSHION	
57	4-926-177-01	CABINET		65	X-4921-248-1	PANEL (AL) ASSY, FRONT	
58	4-924-140-01	SPRING, COMPRESSION		66	3-895-823-41	SCREW (B1.4X4), TAPPING	
59	*4-932-708-11	CUSHION (UPPER LID)		67	4-908-711-01	LABEL, CAUTION, LENS	
				68	4-926-161-01	LEVER, LOCK	



5-3. CHASSIS SECTION (2)




No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	3-703-816-41	SCREW (M1.4X2.5), SPECIAL HEAD		118	4-926-166-01	KNOB (HOLD)	
102	3-335-797-21	SCREW (M1.4X3), TOOTHED LOCK		119	4-926-191-01	SHEET (DIFFUSION)	
103	4-926-169-01	SHEET (S), INSULATING		120	*4-932-721-01	SPACER (LCD TERMINAL)	
104	*X-4921-246-1	CHASSIS SUB ASSY		121	*4-926-186-01	HOLDER (F-LCD)	
105	4-930-113-01	SPRING (SWITCHING), TORSION		122	*4-926-168-01	SPACER (PC)	
106	4-926-175-01	SHEET, ADHESIVE, CHASSIS COVER		123	*4-926-180-01	PLATE (F), LIGHT GUIDE	
107	4-924-138-11	COVER, CHASSIS		124	*4-932-709-01	PAPER, SHIELD	
108	4-932-711-01	PLATE, SLIDE, SWITCHING PLATE		126	*4-932-720-01	PAPER, SHIELD, FLEXIBLE	
109	*4-917-753-01	SPRING		904	1-631-518-11	PC BOARD, FLEXIBLE	
110	3-703-816-02	SCREW (M1.4X2.0), SPECIAL HEAD		905	1-631-517-11	PC BOARD, FLEXIBLE	
111	3-703-816-72	SCREW (M1.4X3.0), SPECIAL HEAD		906	A-3015-778-A	PC BOARD ASSY, SERVO	
112	4-926-181-01	CASE, BATTERY		907	*1-631-514-11	PC BOARD, LED-1	
114	4-930-131-01	TERMINAL, BATTERY		908	A-3015-777-A	PC BOARD ASSY, MAIN	
115	9-911-840-XX	RUBBER (B)		CN401	1-535-608-21	TERMINAL, BATTERY	
116	7-627-853-67	PRECISION SCREW +P 2X6 TYPE 3		LCD801	1-808-770-11	DISPLAY PANEL, LIQUID CRYSTAL	
117	9-911-841-XX	CUSHION (B)					

5-4. MECHANISM SECTION (CDM-555)



Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
151	4-917-622-01	RETAINER, FLEXIBLE		160	7-671-111-11	STEEL, BOUL 1.5MM	
152	4-917-611-01	SHAFT (A)		161	4-921-296-01	SPRING	
153	X-4917-609-1	CHASSIS ASSY, MD		162	7-627-552-38	SCREW, PRECISION +P 1.7X3	
154	4-921-299-01	SCREW (1.7X8), SPECIAL		163	7-627-553-38	SCREW, PRECISION +P 2X3	
155	4-921-292-01	GEAR (B)		164	7-627-552-08	SCREW, PRECISION +P 1.7X2.5	
156	3-315-384-11	WASHER, STOPPER		909	 8-848-141-11	DEVICE, OPTICAL KSS-167B (RP)	
157	4-921-290-01	SPRING		M901	A-3133-384-A	MOTOR ASSY, CLV	
158	*3-880-474-11	CUSHION, 15X50.3		M902	A-3133-334-A	MOTOR SUB ASSY, FEED	
159	4-921-294-01	RACK (A)		S701	1-571-099-11	SWITCH (LIMIT)	

SECTION 6

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:MF: μ F, PF: μ PF.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORSIn each case, U: μ , for example:UA...: μ A..., UPA...: μ PA...,UPC...: μ PC, UPD...: μ PD...

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
901	*1-631-515-11	PC BOARD, LED-2				C312	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	
902	*1-631-516-12	PC BOARD, KEY				C313	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	
903	*1-632-626-11	PC BOARD, KEY FLEXIBLE				C315	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
904	1-631-518-11	PC BOARD, FLEXIBLE				C317	1-135-174-11	TANTAL. CHIP 10MF	20%	10V	
905	1-631-517-11	PC BOARD, FLEXIBLE				C318	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
906	A-3015-778-A	PC BOARD ASSY, SERVO				C401	1-126-206-11	ELECT CHIP 100MF	20%	6.3V	
907	*1-631-514-11	PC BOARD, LED-1				C402	1-135-150-21	TANTAL. CHIP 3.3MF	20%	6.3V	
908	A-3015-777-A	PC BOARD ASSY, MAIN				C403	1-135-091-00	TANTAL. CHIP 1MF	20%	16V	
909	Δ 8-848-141-11	DEVICE, OPTICAL KSS-167B (RP)				C404	1-135-174-11	TANTAL. CHIP 10MF	20%	10V	
912	1-452-473-11	MAGNET									
C101	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V		C405	1-135-130-11	TANTAL. CHIP 4.7MF	20%	6.3V	
C102	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V		C406	1-135-150-21	TANTAL. CHIP 3.3MF	20%	6.3V	
C103	1-135-162-21	TANTAL. CHIP 33MF	20%	4V		C407	1-135-162-21	TANTAL. CHIP 33MF	20%	4V	
C104	1-163-105-00	CERAMIC CHIP 33PF	5%	50V		C408	1-135-174-11	TANTAL. CHIP 10MF	20%	10V	
C105	1-163-133-00	CERAMIC CHIP 470PF	5%	50V		C409	1-135-159-21	TANTAL. CHIP 10MF	20%	16V	
C106	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V		C410	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	
C107	1-135-130-11	TANTAL. CHIP 4.7MF	20%	6.3V		C411	1-126-357-11	ELECT 150MF	20%	16V	
C108	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V		C412	1-135-150-21	TANTAL. CHIP 3.3MF	20%	6.3V	
C110	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V		C413	1-135-159-21	TANTAL. CHIP 10MF	20%	16V	
C111	1-126-206-11	ELECT CHIP 100MF	20%	6.3V		C414	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V	
C112	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V		C415	1-135-174-11	TANTAL. CHIP 10MF	20%	10V	
C113	1-163-117-00	CERAMIC CHIP 100PF	5%	50V		C416	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V	
C114	1-163-129-00	CERAMIC CHIP 330PF	5%	50V		C417	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C201	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V		C418	1-135-162-21	TANTAL. CHIP 33MF	20%	4V	
C202	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V		C420	1-135-174-11	TANTAL. CHIP 10MF	20%	10V	
C203	1-135-162-21	TANTAL. CHIP 33MF	20%	4V		C421	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C204	1-163-105-00	CERAMIC CHIP 33PF	5%	50V		C422	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C205	1-163-133-00	CERAMIC CHIP 470PF	5%	50V		C423	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C206	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V		C424	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C207	1-135-130-11	TANTAL. CHIP 4.7MF	20%	6.3V		C425	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C208	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V		C469	1-135-174-11	TANTAL. CHIP 10MF	20%	10V	
C210	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V		C470	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C211	1-126-206-11	ELECT CHIP 100MF	20%	6.3V		C471	1-135-181-21	TANTAL. CHIP 4.7MF	20%	6.3V	
C212	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V		C501	1-164-156-11	CERAMIC CHIP 0.1MF		25V	
C213	1-163-117-00	CERAMIC CHIP 100PF	5%	50V		C502	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V	
C214	1-163-129-00	CERAMIC CHIP 330PF	5%	50V		C503	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V	
C301	1-163-095-00	CERAMIC CHIP 12PF	5%	50V		C504	1-135-145-11	TANTAL. CHIP 0.47MF	20%	25V	
C302	1-163-095-00	CERAMIC CHIP 12PF	5%	50V		C505	1-163-127-00	CERAMIC CHIP 270PF	5%	50V	
C303	1-135-157-21	TANTAL. CHIP 22MF	20%	4V		C506	1-164-156-11	CERAMIC CHIP 0.1MF		25V	
C304	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V		C507	1-135-162-21	TANTAL. CHIP 33MF	20%	4V	
C305	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V		C508	1-164-156-11	CERAMIC CHIP 0.1MF		25V	
C306	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V		C509	1-135-157-21	TANTAL. CHIP 22MF	20%	4V	
C308	1-135-144-11	TANTAL. CHIP 22MF	20%	6.3V		C510	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V	
C309	1-135-206-11	TANTAL. CHIP 47MF	20%	10V		C511	1-163-095-00	CERAMIC CHIP 12PF	5%	50V	
C310	1-135-174-11	TANTAL. CHIP 10MF	20%	10V		C512	1-135-162-21	TANTAL. CHIP 33MF	20%	4V	
C311	1-162-953-11	CERAMIC CHIP 100PF	5%	50V		C513	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V	

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
C514	1-135-162-21	TANTAL. CHIP 33MF	20%	4V		C803	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V	
C515	1-163-038-00	CERAMIC CHIP 0.1MF		25V		C804	1-135-149-21	TANTAL. CHIP 2.2MF	20%	6.3V	
C516	1-135-162-21	TANTAL. CHIP 33MF	20%	4V		C805	1-162-951-11	CERAMIC CHIP 68PF	5%	50V	
C517	1-163-038-00	CERAMIC CHIP 0.1MF		25V		C806	1-162-951-11	CERAMIC CHIP 68PF	5%	50V	
C518	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V		C807	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C519	1-162-953-11	CERAMIC CHIP 100PF	5%	50V		C808	1-162-638-11	CERAMIC CHIP 1MF		16V	
C520	1-135-181-21	TANTAL. CHIP 4.7MF	20%	6.3V		C809	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V	
C521	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V		C810	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C522	1-135-157-21	TANTAL. CHIP 22MF	20%	4V		C811	1-135-157-21	TANTAL. CHIP 10MF	20%	6.3V	
C523	1-162-953-11	CERAMIC CHIP 100PF	5%	50V		C812	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C524	1-135-157-21	TANTAL. CHIP 22MF	20%	4V		C813	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C525	1-135-181-21	TANTAL. CHIP 4.7MF	20%	6.3V		C814	1-135-150-21	TANTAL. CHIP 3.3MF	20%	6.3V	
C526	1-163-081-00	CERAMIC CHIP 0.22MF		25V		C815	1-162-637-11	CERAMIC CHIP 0.47MF		16V	
C527	1-162-957-11	CERAMIC CHIP 220PF	5%	50V		C818	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C528	1-135-162-21	TANTAL. CHIP 33MF	20%	4V		C851	1-163-113-00	CERAMIC CHIP 68PF	5%	50V	
C529	1-164-234-11	CERAMIC CHIP 1MF		10V		C852	1-163-113-00	CERAMIC CHIP 68PF	5%	50V	
C530	1-163-023-00	CERAMIC CHIP 0.015MF	10%	50V		C853	1-135-157-21	TANTAL. CHIP 22MF	20%	4V	
C531	1-135-157-21	TANTAL. CHIP 22MF	20%	4V		C854	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C532	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V		C855	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C533	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V		C856	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C534	1-162-637-11	CERAMIC CHIP 0.47MF		16V		CN401	1-535-608-21	TERMINAL, BATTERY			
C535	1-163-135-00	CERAMIC CHIP 560PF	5%	50V		CN501	1-563-546-11	HOUSING, CONNECTOR 12P			
C536	1-163-038-00	CERAMIC CHIP 0.1MF		25V		CN502	1-568-290-11	SOCKET, CONNECTOR 4P			
C537	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V		CN802	*1-566-533-11	CONNECTOR, FPC (ZIF) 17P			
C538	1-164-234-11	CERAMIC CHIP 1MF		10V		CN804	*1-566-533-11	CONNECTOR, FPC (ZIF) 17P			
C540	1-162-953-11	CERAMIC CHIP 100PF	5%	50V		CN805	1-566-531-11	CONNECTOR, FPC (ZIF) 15P			
C541	1-163-038-00	CERAMIC CHIP 0.1MF		25V		D301	8-719-106-70	DIODE RD12M2B1			
C542	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V		D302	8-719-106-70	DIODE RD12M2B1			
C543	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V		D303	8-719-106-70	DIODE RD12M2B1			
C545	1-135-206-11	TANTAL. CHIP 47MF	20%	10V		D304	8-719-106-70	DIODE RD12M2B1			
C546	1-135-148-21	TANTAL. CHIP 1.5MF	10%	10V		D305	8-719-951-22	DIODE IMN10T108			
C547	1-135-174-11	TANTAL. CHIP 10MF	20%	10V		D401	8-719-975-34	DIODE RB110C-T100			
C548	1-163-081-00	CERAMIC CHIP 0.22MF		25V		D403	8-719-400-18	DIODE MA152WK			
C549	1-163-986-00	CERAMIC CHIP 0.027MF	10%	25V		D405	8-719-975-42	DIODE RB411D-T97			
C550	1-164-234-11	CERAMIC CHIP 1MF		10V		D406	8-719-400-18	DIODE MA152WK			
C551	1-164-156-11	CERAMIC CHIP 0.1MF		25V		D407	8-719-105-63	DIODE RD4.3MB1			
C552	1-164-156-11	CERAMIC CHIP 0.1MF		25V		D409	8-719-975-34	DIODE RB110C-T100			
C553	1-164-234-11	CERAMIC CHIP 1MF		10V		D410	8-719-800-76	DIODE 1SS226			
C554	1-164-234-11	CERAMIC CHIP 1MF		10V		D411	8-719-400-18	DIODE MA152WK			
C555	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V		D412	8-719-400-18	DIODE MA152WK			
C556	1-164-156-11	CERAMIC CHIP 0.1MF		25V		D413	8-719-975-34	DIODE RB110C-T100			
C557	1-135-174-11	TANTAL. CHIP 10MF	20%	10V		D414	8-719-938-72	DIODE SB01-05CP			
C558	1-135-091-00	TANTAL. CHIP 1MF	20%	16V		D415	8-719-400-18	DIODE MA152WK			
C559	1-163-010-11	CERAMIC CHIP 0.0012MF	10%	50V		D450	8-719-105-91	DIODE RD5.6MB2			
C561	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V		D485	8-719-105-72	DIODE RD4.7MB1			
C562	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V		D501	8-719-975-46	DIODE RB471E			
C563	1-135-162-21	TANTAL. CHIP 33MF	20%	4V		D503	8-719-938-72	DIODE SB01-05CP			
C570	1-126-114-11	ELECT 470MF	20%	6.3V		D504	8-719-938-72	DIODE SB01-05CP			
C571	1-126-114-11	ELECT 470MF	20%	6.3V		D505	8-719-400-18	DIODE MA152WK			
C601	1-162-638-11	CERAMIC CHIP 1MF		16V		D506	8-719-106-70	DIODE RD12M-B1			
C602	1-162-995-11	CERAMIC CHIP 0.022MF		50V		D507	8-719-106-70	DIODE RD12M-B1			
C604	1-162-953-11	CERAMIC CHIP 100PF	5%	50V		D801	8-719-951-22	DIODE IMN10T108			
C605	1-162-953-11	CERAMIC CHIP 100PF	5%	50V		D803	8-719-400-18	DIODE MA152WK			
C606	1-162-953-11	CERAMIC CHIP 100PF	5%	50V		D804	8-719-400-18	DIODE MA152WK			
C607	1-162-953-11	CERAMIC CHIP 100PF	5%	50V		D805	8-719-975-46	DIODE RB471E			
C801	1-135-157-21	TANTAL. CHIP 22MF	20%	4V		D807	8-719-400-18	DIODE MA152WK			
C802	1-163-038-00	CERAMIC CHIP 0.1MF		25V							

Ref.No.	Part No.	Description
D808	8-719-938-72	DIODE SB01-05CP
D809	8-719-400-18	DIODE MA152WK
D810	8-719-105-91	DIODE RD5.6MB2
D811	8-719-800-76	DIODE 1SS226
D813	8-719-400-18	DIODE MA152WK
D814	8-719-400-18	DIODE MA152WK
D822	8-719-106-70	DIODE RD12MB1
D823	8-719-106-70	DIODE RD12MB1
D824	8-719-106-70	DIODE RD12MB1
D825	8-719-400-18	DIODE MA152WK
D826	8-719-400-18	DIODE MA152WK
D901	8-719-302-88	DIODE SEL2913K-D
D902	8-719-302-88	DIODE SEL2913K-D
D903	8-719-302-88	DIODE SEL2913K-D
D904	8-719-302-88	DIODE SEL2913K-D
D905	8-719-302-88	DIODE SEL2913K-D
D906	8-719-302-88	DIODE SEL2913K-D
D907	8-719-302-88	DIODE SEL2913K-D
D908	8-719-302-88	DIODE SEL2913K-D
D909	8-719-302-88	DIODE SEL2913K-D
D910	8-719-302-88	DIODE SEL2913K-D
D951	8-719-302-88	DIODE SEL2913K-D
D952	8-719-302-88	DIODE SEL2913K-D
D954	8-719-302-88	DIODE SEL2913K-D
D955	8-719-302-88	DIODE SEL2913K-D
IC101	8-759-983-82	IC PCM66P-J
IC102	8-759-710-79	IC NJM2107F
IC103	8-759-710-79	IC NJM2107F
IC201	8-759-983-82	IC PCM66P-J
IC202	8-759-710-79	IC NJM2107F
IC203	8-759-710-79	IC NJM2107F
IC301	8-752-332-80	IC CXD1160AQ
IC302	8-752-334-07	IC CXD2551M
IC305	8-759-230-43	IC TC7S04F
IC306	8-752-039-94	IC CXA1263M-T3
IC401	8-759-230-43	IC TC7S04F
IC402	8-759-977-71	IC GPIF31T (OPTICAL DIGITAL OUT)
IC501	8-752-033-55	IC CXA1271Q
IC502	8-752-033-98	IC CXA1272R
IC503	8-759-710-79	IC NJM2107F
IC504	8-759-030-17	IC MPC1715FU
IC505	8-759-230-43	IC TC7S04F
IC601	8-752-332-38	IC CXD1125Q
IC602	8-752-328-67	IC CXK5816MA-15L
IC801	8-752-811-62	IC CXP5086-608Q
IC802	8-759-982-77	IC BA10339F
IC803	8-759-234-10	IC TC7S32F
IC851	8-759-420-54	IC MN18762-SND-3
IC852	8-759-205-06	IC MC74HC74AF
IC853	8-759-013-92	IC MC74HC164F
IC854	8-759-013-92	IC MC74HC164F
IC855	8-759-231-30	IC TC4530F
IC856	8-759-234-10	IC TC7S32F
IC857	8-759-234-10	IC TC7S32F
IC858	8-759-234-10	IC TC7S32F
IC859	8-759-986-85	IC S-8052ALR-LF
J301	1-563-281-41	JACK (LINE OUT)
J302	1-563-281-51	JACK (PHONES)
J401	1-562-961-11	JACK (DC IN 9V)
J801	1-563-281-61	JACK (REMOTE)

Ref.No.	Part No.	Description
JR301	1-216-295-00	METAL GLAZE 0 5% 1/10W
JR302	1-216-864-11	METAL GLAZE 0 5% 1/16W
JR303	1-216-295-00	METAL GLAZE 0 5% 1/10W
JR801	1-216-296-00	METAL GLAZE 0 5% 1/8W
JR802	1-216-296-00	METAL GLAZE 0 5% 1/8W
JR803	1-216-864-11	METAL GLAZE 0 5% 1/16W
JR804	1-216-295-00	METAL GLAZE 0 5% 1/10W
L101	1-410-997-31	INDUCTOR CHIP 2.2UH
L102	1-410-997-31	INDUCTOR CHIP 2.2UH
L201	1-410-997-31	INDUCTOR CHIP 2.2UH
L202	1-410-997-31	INDUCTOR CHIP 2.2UH
L301	1-410-997-31	INDUCTOR CHIP 2.2UH
L402	1-412-039-51	INDUCTOR CHIP 100UH
L403	1-412-031-11	INDUCTOR CHIP 47UH
L404	1-412-029-11	INDUCTOR CHIP 10UH
L405	1-412-029-11	INDUCTOR CHIP 10UH
L501	1-412-029-11	INDUCTOR CHIP 10UH
L502	1-412-039-51	INDUCTOR CHIP 100UH
L503	1-412-032-11	INDUCTOR CHIP 100UH
L504	1-412-039-51	INDUCTOR CHIP 100UH
L505	1-412-039-51	INDUCTOR CHIP 100UH
L801	1-410-997-31	INDUCTOR CHIP 2.2UH
L802	1-410-997-31	INDUCTOR CHIP 2.2UH
L803	1-410-997-31	INDUCTOR CHIP 2.2UH
LCD701	1-808-771-11	DISPLAY PANEL, LIQUID CRYSTAL
LC801	1-808-770-11	DISPLAY PANEL, LIQUID CRYSTAL
M901	A-3133-384-A	MOTOR ASSY, CLV
M902	A-3133-334-A	MOTOR SUB ASSY, FEED
Q101	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
Q102	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
Q103	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
Q201	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
Q202	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
Q203	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
Q301	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
Q303	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
Q401	8-729-904-87	TRANSISTOR 2SB1197K-R
Q402	8-729-901-78	TRANSISTOR 2SC2412K
Q403	8-729-901-00	TRANSISTOR DTC124EK
Q406	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
Q407	8-729-216-22	TRANSISTOR 2SA1162G
Q408	8-729-903-10	TRANSISTOR FMW
Q409	8-729-921-84	TRANSISTOR 2SB1182F5-Q
Q410	8-729-901-03	TRANSISTOR DTC144WK
Q411	8-729-901-00	TRANSISTOR DTC124EK
Q412	8-729-207-55	TRANSISTOR RN1401
Q413	8-729-901-78	TRANSISTOR 2SC2412K
Q414	8-729-901-05	TRANSISTOR DTA124EK
Q415	8-729-901-03	TRANSISTOR DTC144WK
Q416	8-729-901-00	TRANSISTOR DTC124EK
Q417	8-729-921-84	TRANSISTOR 2SB1182F5-Q
Q418	8-729-903-10	TRANSISTOR FMW
Q420	8-729-907-39	TRANSISTOR IMD2
Q421	8-729-901-05	TRANSISTOR DTA124EK
Q422	8-729-901-00	TRANSISTOR DTC124EK

Ref.No.	Part No.	Description
Q423	8-729-116-06	TRANSISTOR 2SK160-K6
Q424	8-729-901-00	TRANSISTOR DTC124EK
Q425	8-729-216-22	TRANSISTOR 2SA812
Q427	8-729-216-22	TRANSISTOR 2SA812
Q428	8-729-902-96	TRANSISTOR FMS1
Q429	8-729-903-10	TRANSISTOR FMW1
Q430	8-729-116-06	TRANSISTOR 2SK160-K6
Q431	8-729-807-33	TRANSISTOR 2SB1123-R
Q432	8-729-901-00	TRANSISTOR DTC124EK-T-97
Q433	8-729-807-33	TRANSISTOR 2SB1112-R
Q435	8-729-904-87	TRANSISTOR 2SB1197K-R
Q461	8-729-904-87	TRANSISTOR 2SB1197K-R
Q462	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
Q463	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
Q464	8-729-901-05	TRANSISTOR DTA124EK
Q465	8-729-901-00	TRANSISTOR DTC124EK
Q466	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
Q501	8-729-402-90	TRANSISTOR XN4609
Q502	8-729-904-87	TRANSISTOR 2SB1197K
Q503	8-729-920-78	TRANSISTOR 2SC2412K-R
Q504	8-729-920-78	TRANSISTOR 2SC2412K-R
Q505	8-729-805-43	TRANSISTOR 2SC3396
Q506	8-729-901-00	TRANSISTOR DTC124EK
Q801	8-729-901-00	TRANSISTOR DTC124EK
Q804	8-729-901-05	TRANSISTOR DTA124EK
Q805	8-729-921-81	TRANSISTOR 2SD1781K-QR-T97
Q806	8-729-901-05	TRANSISTOR DTA124EK
Q807	8-729-907-39	TRANSISTOR IMD2
Q808	8-729-901-06	TRANSISTOR DTA144EK
Q809	8-729-901-00	TRANSISTOR DTC124EK
R101	1-216-699-11	METAL CHIP 100K 0.50% 1/10W
R102	1-216-699-11	METAL CHIP 100K 0.50% 1/10W
R103	1-216-675-11	METAL CHIP 10K 0.50% 1/10W
R105	1-216-823-11	METAL GLAZE 1.5K 5% 1/16W
R106	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W
R107	1-216-813-11	METAL GLAZE 220 5% 1/16W
R113	1-216-823-11	METAL GLAZE 1.5K 5% 1/16W
R114	1-216-797-11	METAL GLAZE 10 5% 1/16W
R115	1-216-833-11	METAL GLAZE 10K 5% 1/16W
R121	1-216-663-11	METAL CHIP 3.3K 0.50% 1/10W
R122	1-216-653-11	METAL CHIP 1.2K 0.50% 1/10W
R123	1-216-823-11	METAL GLAZE 1.5K 5% 1/16W
R201	1-216-699-11	METAL CHIP 100K 0.50% 1/10W
R202	1-216-699-11	METAL CHIP 100K 0.50% 1/10W
R203	1-216-675-11	METAL CHIP 10K 0.50% 1/10W
R205	1-216-823-11	METAL GLAZE 1.5K 5% 1/16W
R206	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W
R207	1-216-813-11	METAL GLAZE 220 5% 1/16W
R213	1-216-823-11	METAL GLAZE 1.5K 5% 1/16W
R214	1-216-797-11	METAL GLAZE 10 5% 1/16W
R215	1-216-833-11	METAL GLAZE 10K 5% 1/16W
R221	1-216-663-11	METAL CHIP 3.3K 0.50% 1/10W
R222	1-216-653-11	METAL CHIP 1.2K 0.50% 1/10W
R223	1-216-823-11	METAL GLAZE 1.5K 5% 1/16W
R303	1-216-830-11	METAL GLAZE 5.6K 5% 1/16W
R304	1-216-021-00	METAL GLAZE 68 5% 1/10W
R307	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R308	1-216-833-11	METAL GLAZE 10K 5% 1/16W

Ref.No.	Part No.	Description
R309	1-216-833-11	METAL GLAZE 10K 5% 1/16W
R310	1-216-833-11	METAL GLAZE 10K 5% 1/16W
R311	1-216-841-11	METAL GLAZE 47K 5% 1/16W
R312	1-216-857-11	METAL GLAZE 1M 5% 1/16W
R313	1-216-671-11	METAL CHIP 6.8K 0.50% 1/10W
R401	1-216-832-11	METAL GLAZE 8.2K 5% 1/16W
R402	1-216-845-11	METAL GLAZE 100K 5% 1/16W
R403	1-216-841-11	METAL GLAZE 47K 5% 1/16W
R404	1-216-861-11	METAL GLAZE 2.2M 5% 1/16W
R405	1-216-106-00	METAL GLAZE 240K 5% 1/10W
R406	1-216-837-11	METAL GLAZE 22K 5% 1/16W
R407	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R408	1-216-857-11	METAL GLAZE 1M 5% 1/16W
R409	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R410	1-216-033-00	METAL GLAZE 220 5% 1/10W
R411	1-216-833-11	METAL GLAZE 10K 5% 1/16W
R412	1-216-092-00	METAL GLAZE 62K 5% 1/10W
R413	1-216-830-11	METAL GLAZE 5.6K 5% 1/16W
R414	1-216-837-11	METAL GLAZE 22K 5% 1/16W
R415	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R416	1-216-021-00	METAL GLAZE 68 5% 1/10W
R417	1-216-657-11	METAL CHIP 1.8K 0.50% 1/10W
R418	1-216-664-11	METAL CHIP 3.6K 0.50% 1/10W
R419	1-216-663-11	METAL CHIP 3.3K 0.50% 1/10W
R420	1-216-697-11	METAL CHIP 82K 0.50% 1/10W
R421	1-216-041-00	METAL GLAZE 470 5% 1/10W
R422	1-216-037-00	METAL GLAZE 330 5% 1/10W
R423	1-216-833-11	METAL GLAZE 10K 5% 1/16W
R426	1-216-861-11	METAL GLAZE 2.2M 5% 1/16W
R427	1-217-806-11	METAL GLAZE 1 5% 1/8W
R428	1-217-806-11	METAL GLAZE 1 5% 1/8W
R429	1-216-834-11	METAL GLAZE 12K 5% 1/16W
R430	1-216-826-11	METAL GLAZE 2.7K 5% 1/16W
R435	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R436	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R437	1-216-837-11	METAL GLAZE 22K 5% 1/16W
R438	1-216-041-00	METAL GLAZE 470 5% 1/10W
R439	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R440	1-216-837-11	METAL GLAZE 22K 5% 1/16W
R441	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R442	1-216-017-00	METAL GLAZE 47 5% 1/10W
R443	1-216-041-00	METAL GLAZE 470 5% 1/10W
R444	1-216-675-11	METAL CHIP 10K 0.50% 1/10W
R469	1-216-833-11	METAL GLAZE 10K 5% 1/16W
R471	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R472	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R501	1-216-024-00	METAL GLAZE 91 5% 1/10W
R502	1-216-079-00	METAL GLAZE 18K 5% 1/10W
R503	1-216-834-11	METAL GLAZE 12K 5% 1/16W
R504	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R505	1-216-105-00	METAL GLAZE 220K 5% 1/10W
R506	1-216-837-11	METAL GLAZE 22K 5% 1/16W
R507	1-216-835-11	METAL GLAZE 15K 5% 1/16W
R508	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W
R509	1-216-833-11	METAL GLAZE 10K 5% 1/16W
R510	1-216-150-00	METAL GLAZE 10 5% 1/8W
R511	1-216-839-11	METAL GLAZE 33K 5% 1/16W

Ref.No.	Part No.	Description							
R512	1-216-837-11	METAL GLAZE	22K	5%	1/16W				
R513	1-216-859-11	METAL GLAZE	1.5M	5%	1/16W				
R514	1-216-851-11	METAL GLAZE	330K	5%	1/16W				
R515	1-216-833-11	METAL GLAZE	10K	5%	1/16W				
R516	1-216-843-11	METAL GLAZE	68K	5%	1/16W				
R517	1-216-845-11	METAL GLAZE	100K	5%	1/16W				
R518	1-216-106-00	METAL GLAZE	240K	5%	1/10W				
R519	1-216-844-11	METAL GLAZE	82K	5%	1/16W				
R520	1-216-844-11	METAL GLAZE	82K	5%	1/16W				
R521	1-216-837-11	METAL GLAZE	22K	5%	1/16W				
R522	1-216-845-11	METAL GLAZE	100K	5%	1/16W				
R523	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W				
R524	1-216-118-00	METAL GLAZE	750K	5%	1/10W				
R525	1-216-833-11	METAL GLAZE	10K	5%	1/16W				
R526	1-216-841-11	METAL GLAZE	47K	5%	1/16W				
R527	1-216-687-11	METAL CHIP	33K	0.50%	1/10W				
R528	1-216-103-00	METAL GLAZE	180K	5%	1/10W				
R529	1-216-062-00	METAL GLAZE	3.6K	5%	1/10W				
R530	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W				
R531	1-216-121-00	METAL GLAZE	1M	5%	1/10W				
R532	1-216-687-11	METAL CHIP	33K	0.50%	1/10W				
R533	1-216-833-11	METAL GLAZE	10K	5%	1/16W				
R534	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W				
R535	1-216-821-11	METAL GLAZE	1K	5%	1/16W				
R536	1-216-846-11	METAL GLAZE	120K	5%	1/16W				
R537	1-216-846-11	METAL GLAZE	120K	5%	1/16W				
R538	1-216-841-11	METAL GLAZE	47K	5%	1/16W				
R539	1-216-857-11	METAL GLAZE	1M	5%	1/16W				
R540	1-216-073-00	METAL GLAZE	10K	5%	1/10W				
R542	1-216-847-11	METAL GLAZE	150K	5%	1/16W				
R543	1-216-847-11	METAL GLAZE	150K	5%	1/16W				
R544	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W				
R545	1-216-838-11	METAL GLAZE	27K	5%	1/16W				
R546	1-216-840-11	METAL GLAZE	39K	5%	1/16W				
R548	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W				
R549	1-216-857-11	METAL GLAZE	1M	5%	1/16W				
R550	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W				
R551	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W				
R552	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W				
R553	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W				
R554	1-216-049-00	METAL GLAZE	1K	5%	1/10W				
R555	1-216-861-11	METAL GLAZE	2.2M	5%	1/16W				
R556	1-216-109-00	METAL GLAZE	330K	5%	1/10W				
R557	1-216-857-11	METAL GLAZE	1M	5%	1/16W				
R601	1-216-841-11	METAL GLAZE	47K	5%	1/16W				
R602	1-216-845-11	METAL GLAZE	100K	5%	1/16W				
R603	1-216-841-11	METAL GLAZE	47K	5%	1/16W				
R801	1-216-833-11	METAL GLAZE	10K	5%	1/16W				
R802	1-216-837-11	METAL GLAZE	22K	5%	1/16W				
R803	1-216-837-11	METAL GLAZE	22K	5%	1/16W				
R804	1-216-837-11	METAL GLAZE	22K	5%	1/16W				
R805	1-216-833-11	METAL GLAZE	10K	5%	1/16W				
R806	1-216-841-11	METAL GLAZE	47K	5%	1/16W				
R807	1-216-851-11	METAL GLAZE	330K	5%	1/16W				
R808	1-216-041-00	METAL GLAZE	470	5%	1/10W				
R809	1-216-009-00	METAL GLAZE	22	5%	1/10W				
R810	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W				
R811	1-216-097-00	METAL GLAZE	100K	5%	1/10W				
R812	1-216-824-11	METAL GLAZE	1.8K	5%	1/16W				
R813	1-216-821-11	METAL GLAZE	1K	5%	1/16W				
R814	1-216-298-00	METAL GLAZE	2.2	5%	1/10W				
R815	1-216-025-00	METAL GLAZE	100	5%	1/10W				
R816	1-218-163-11	METAL GLAZE	120K	1%	1/10W				
R817	1-216-694-11	METAL CHIP	62K	0.50%	1/10W				
R818	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W				
R819	1-216-654-11	METAL CHIP	1.3K	0.50%	1/10W				
R820	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W				
R821	1-216-086-00	METAL GLAZE	36K	5%	1/10W				
R823	1-216-857-11	METAL GLAZE	1M	5%	1/16W				
R824	1-216-837-11	METAL GLAZE	22K	5%	1/16W				
R826	1-216-833-11	METAL GLAZE	10K	5%	1/16W				
R831	1-216-845-11	METAL GLAZE	100K	5%	1/16W				
R832	1-216-849-11	METAL GLAZE	220K	5%	1/16W				
R833	1-216-833-11	METAL GLAZE	10K	5%	1/16W				
R839	1-216-837-11	METAL GLAZE	22K	5%	1/16W				
R851	1-216-081-00	METAL GLAZE	22K	5%	1/10W				
R852	1-216-081-00	METAL GLAZE	22K	5%	1/10W				
R853	1-216-073-00	METAL GLAZE	10K	5%	1/10W				
R854	1-216-081-00	METAL GLAZE	22K	5%	1/10W				
R855	1-216-678-11	METAL CHIP	13K	0.50%	1/10W				
R856	1-216-651-11	METAL CHIP	1K	0.50%	1/10W				
R857	1-216-658-11	METAL CHIP	2K	0.50%	1/10W				
R858	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W				
R859	1-216-675-11	METAL CHIP	10K	0.50%	1/10W				
R860	1-216-682-11	METAL CHIP	20K	0.50%	1/10W				
R901	1-216-021-00	METAL GLAZE	68	5%	1/10W				
R902	1-216-021-00	METAL GLAZE	68	5%	1/10W				
R903	1-216-021-00	METAL GLAZE	68	5%	1/10W				
R904	1-216-033-00	METAL GLAZE	220	5%	1/10W				
R951	1-216-033-00	METAL GLAZE	220	5%	1/10W				
R952	1-216-033-00	METAL GLAZE	220	5%	1/10W				
RV401	1-237-325-11	RES, ADJ, METAL GLAZE	4.7K						
RV402	1-237-328-11	RES, ADJ, METAL GLAZE	47K						
RV501	1-230-869-11	RES, ADJ, METAL GLAZE	4.7K						
RV502	1-230-871-11	RES, ADJ, METAL GLAZE	22K						
RV503	1-230-873-11	RES, ADJ, METAL GLAZE	47K						
RV504	1-237-575-11	RES, ADJ, METAL GLAZE	1.0K						
RV505	1-230-873-11	RES, ADJ, METAL GLAZE	47K						
RV801	1-237-143-11	RES, ADJ, METAL GLAZE	10K						
S701	1-571-099-11	SWITCH (LIMIT)							
S801	1-571-484-11	SWITCH, KEY BOARD (ENTER REMAIN PLAY KEY)							
S802	1-570-204-11	SWITCH, KEY BOARD (▶▶▶)							
S803	1-570-204-11	SWITCH, KEY BOARD (□)							
S804	1-570-204-11	SWITCH, KEY BOARD (▶▶)							
S805	1-570-204-11	SWITCH, KEY BOARD (▶▶▶)							
S808	1-572-003-11	SWITCH, SLIDE (HOLD →)							
S901	1-554-911-11	SWITCH, LEAF (OPEN)							
S902	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(EQ)							
S903	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(+)							
S904	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(-)							
S905	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(+)							
S906	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(-)							
S907	1-571-737-21	SWITCH, KEY BBOARD (REFLOW)(MODE)							
X301	1-567-737-11	VIBRATOR, CRYSTAL							
X801	1-577-064-11	VIBRATOR, CHIP CERAMIC							
X851	1-567-196-11	OSCILLATOR, CERAMIC							

ACCESSORY & PACKING MATERIAL

1-463-691-11	(US)...ADAPTOR, AC (AC-930A)
1-463-700-11	(UK)...ADAPTOR, AC (AC-930A)
1-463-702-11	(E)...ADAPTOR, AC (AC-950W)
1-463-705-11	(AEP,FRENCH)...ADAPTOR, AC (AC-930AEP)
1-463-968-11	(US)...ADAPTOR, AC (AC-940)
1-526-565-00	(E)...AC PLUG ADAPTOR
1-528-297-11	(US,UK,E).....BATTERY PACK (BP-2EX)
1-528-297-21	(AEP,FRENCH)...BATTERY PACK (BP-2EX)
1-555-658-21	CORD, CONNECTION
3-750-539-11	(AEP,FRENCH,UK,E)...MANUAL, INSTRUCTION
3-750-539-21	(US).....MANUAL, INSTRUCTION
3-750-539-41	(AEP).....MANUAL, INSTRUCTION
4-920-407-01	(US)...BAG, PROTECTION
4-926-173-01	CASE, CARRYING
*4-926-192-01	CUSHION (UPPER)
4-926-193-01	(US,E).....CUSHION (LOWER)
*4-932-701-01	(AEP,FRENCH,UK)...CUSHION (LOWER)
*4-926-194-01	(US).....INDIVIDUAL CARTON
*4-926-199-01	(E).....INDIVIDUAL CARTON
*4-932-702-01	(AEP).....INDIVIDUAL CARTON
*4-932-704-01	(FRENCH,UK)...INDIVIDUAL CARTON